

Form 3160-3  
(September 2001)UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

## APPLICATION FOR PERMIT TO DRILL OR REENTER

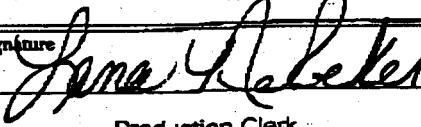
FORM APPROVED  
OMB No. 1004-0136  
Expires January 31, 2004

1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. UTU-74872
1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name N/A
2. Name of Operator Newfield Production Company		7. If Unit or CA Agreement, Name and No. N/A
3a. Address Route #3 Box 3630, Myton UT 84052	3b. Phone No. (include area code) (435) 646-3721	8. Lease Name and Well No. Federal 4-33-8-18
4. Location of Well (Report location clearly and in accordance with any State requirements.) At surface NW/NW 455 FNL 627 FWL At proposed prod. zone		9. API Well No.
10. Field and Pool, or Exploratory		11. Sec., T., R., M., or Blk. and Survey or Area NW/NW Sec. 33, T8S R18E
12. Distance in miles and direction from nearest town or post office* Approximately 22.3 miles south of Myton, Utah		12. County or Parish Utah
13. State UT		
15. Distance from proposed location* to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) Approx. 455' Waa, 6145' turn	16. No. of Acres in lease 677.36	17. Spacing Unit dedicated to this well 40 Acres
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. Approx. 965'	19. Proposed Depth 6500'	20. BLM/BIA Bond No. on file UTU0056
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 4981.3' GL	22. Approximate date work will start* 1st Quarter 2005	23. Estimated duration Approximately seven (7) days from start to its release.

## 24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, shall be attached to this form:

- |   |  |
|---|--|
| 1. Well plat certified by a registered surveyor.  | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).    |
| 2. A Drilling Plan.   | 5. Operator certification.   |
| 3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office). | 6. Such other site specific information and/or plans as may be required by the authorized officer. |

25. Signature 	Name (Printed/Typed) Lana Nebeker	Date 9-30-04
Title Production Clerk		
Approved by (Signature)	Name (Printed/Typed)	Date
Title	Office	

Application approval does not warrant or certify the the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Conditions of approval, if any, are attached.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

\*(Instructions on reverse)

**T8S, R18E, S.L.B.&M.**

S89°58'W - 80.02 (G.L.O.)

**INLAND PRODUCTION COMPANY**

WELL LOCATION, FEDERAL 4-33-8-18,  
LOCATED AS SHOWN IN THE NW 1/4 NW  
1/4 OF SECTION 33, T8S, R18E,  
S.L.B.&M. UINTAH COUNTY, UTAH.

1910  
Brass Cop

S89°58'W G.L.O. (Basis of Bearings)  
2648.30' (Measured)

1910  
Brass Cop

N00°03'W (G.L.O.)  
N00°05'28"E - 5300.89' (Meas.)

Proportioned  
(Not Set)

**33**

**WELL LOCATION:  
FEDERAL 4-33-8-18**

ELEV. UNGRADED GROUND = 4981.9'

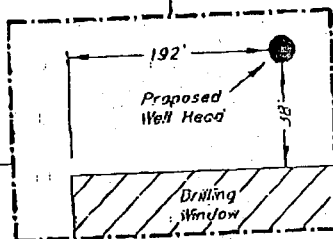
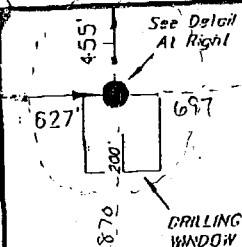
Brass Cop

S89°52'14"E - 5280.54' (Meas.)

N63°59'E (G.L.O.)

Brass Cop

N00°02'W (G.L.O.)  
N00°05'17"E - 2656.52' (Meas.)



**Detail**  
No Scale



THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS  
PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS  
MADE BY ME OR UNDER MY SUPERVISION AND THAT  
THE SAME ARE TRUE AND CORRECT TO THE BEST OF  
MY KNOWLEDGE AND BELIEF. No. 189377

STACY W.  
REGISTERED LAND SURVEYOR  
REGISTRATION No. 189377  
STATE OF UTAH

**TRI STATE LAND SURVEYING & CONSULTING**  
180 NORTH VERNAL AVE. - VERNAL, UTAH 84078  
(435) 781-2501

SCALE: 1" = 1000'

SURVEYED BY: C.M.

DATE: 9-7-04

DRAFTED BY: F.T.M.

NOTES:

FILE #

◆ = SECTION CORNERS LOCATED

BASIS OF ELEV; U.S.G.S. 7-1/2 min QUAD (PARIE ITE DRAW SW)

16/05/2004 10:08 4305455031

INLAND

U-36846

28

8S/18E

UTU-74494

UTU-65969

ML-22058

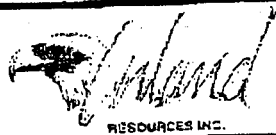
UTU-74872

UTU-65969

UTU-65970

U-17424

UTU-74835



Federal 3-33-8-18  
SEC. 33, T8S, R18E, S.L.B.&M.

Tri-State  
Land Surveying Inc.  
(435) 781-2501  
35 West 100 North Vernal, Utah 84078

SCALE: 1" = 2000'  
DRAWN BY: bgm  
DATE: 09-09-2004

Legend  
Existing Road  
Proposed Access

TOPOGRAPHIC MAP  
"B"

NEWFIELD PRODUCTION COMPANY  
FEDERAL 3-33-8-18  
NE/NW SECTION 33, T8S, R18E  
UINTAH COUNTY, UTAH

ONSHORE ORDER NO. 1

**DRILLING PROGRAM**

1. **GEOLOGIC SURFACE FORMATION:**

Uinta formation of Upper Eocene Age

2. **ESTIMATED TOPS OF IMPORTANT GEOLOGIC MARKERS:**

Uinta	0' – 1640'
Green River	1735'
Wasatch	6300'

3. **ESTIMATED DEPTHS OF ANTICIPATED WATER, OIL, GAS OR MINERALS:**

Green River Formation 1735' – 6300' - Oil

4. **PROPOSED CASING PROGRAM**

Please refer to the Monument Butte Field Standard Operation Procedure (SOP).

5. **MINIMUM SPECIFICATIONS FOR PRESSURE CONTROL:**

Please refer to the Monument Butte Field SOP. See Exhibit "C".

6. **TYPE AND CHARACTERISTICS OF THE PROPOSED CIRCULATION MUDS:**

Please refer to the Monument Butte Field SOP.

7. **AUXILIARY SAFETY EQUIPMENT TO BE USED:**

Please refer to the Monument Butte Field SOP.

8. **TESTING, LOGGING AND CORING PROGRAMS:**

Please refer to the Monument Butte Field SOP.

9. **ANTICIPATED ABNORMAL PRESSURE OR TEMPERATURE:**

The anticipated maximum bottom hole pressure is 2000 psi. It is not anticipated that abnormal temperatures will be encountered.

10. **ANTICIPATED STARTING DATE AND DURATION OF THE OPERATIONS:**

Please refer to the Monument Butte Field SOP.

**NEWFIELD PRODUCTION COMPANY  
FEDERAL #3-33-8-18  
NE/NW SECTION 33, T8S, R18E  
UINTAH COUNTY, UTAH**

**ONSHORE ORDER NO. 1**

**MULTI-POINT SURFACE USE & OPERATIONS PLAN**

**1. EXISTING ROADS**

See attached Topographic Map "A"

To reach Newfield Production Company well location site Federal #3-33-8-18 located in the NE 1/4 NW 1/4 Section 33, T8S, R18E, Uintah County, Utah:

Proceed southwesterly out of Myton, Utah along Highway 40 - 1.6 miles  $\pm$  to the junction of this highway and UT State Hwy 53; proceed southeasterly along Hwy 53 - 13.8 miles  $\pm$  to it's junction with an existing dirt road to the north; proceed northerly  $\pm$  0.3 miles  $\pm$  to it's junction with an existing road to the east; proceed northeasterly  $\pm$  6.5 miles to it's junction with an existing road to the north  $\pm$  .01 to it's junction with the beginning of the proposed access road; proceed northeasterly along the proposed access road - 5,530'  $\pm$  to the proposed well location.

**2. PLANNED ACCESS ROAD**

See Topographic Map "B" for the location of the proposed access road.

**3. LOCATION OF EXISTING WELLS**

Refer to Exhibit "B".

**4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES**

Please refer to the Monument Butte Field Standard Operating Procedure (SOP).

**5. LOCATION AND TYPE OF WATER SUPPLY**

Please refer to the Monument Butte Field SOP. See Exhibit "A".

**6. SOURCE OF CONSTRUCTION MATERIALS**

Please refer to the Monument Butte Field SOP.

**7. METHODS FOR HANDLING WASTE DISPOSAL**

Please refer to the Monument Butte Field SOP.

**8. ANCILLARY FACILITIES**

Please refer to the Monument Butte Field SOP.

9. **WELL SITE LAYOUT**

See attached Location Layout Diagram.

10. **PLANS FOR RESTORATION OF SURFACE**

Please refer to the Monument Butte Field SOP.

11. **SURFACE OWNERSHIP** - Bureau Of Land Management

12. **OTHER ADDITIONAL INFORMATION**

The Archaeological Resource Survey and Paleontological Resource Survey for this area are attached. MOAC Report #03-154, 02/3/04. Paleontological Resource Survey prepared by, Wade E. Miller, 5/12/04. See attached report cover pages, Exhibit "D".

Newfield Production Company requests 4,730' of disturbed area be granted in Lease UTU-74872 to allow for construction of the proposed gas lines. It is proposed that the ROW and disturbed area will be 50' wide to allow for construction of a 4" gas gathering line, and a 3" poly fuel gas line. Both lines will tie in to the existing pipeline infrastructure. **Refer to Topographic Map "C."** For a ROW plan of development, please refer to the Monument Butte Field SOP.

Newfield Production Company requests 4,730' of disturbed area be granted in Lease UTU-74872 to allow for construction of the proposed water lines. It is proposed that the ROW and disturbed area will be 50' wide to allow for construction of a buried 3" steel water injection line and a 3" poly water return line. **Refer to Topographic Map "C."** For a ROW plan of development, please refer to the Monument Butte Field SOP.

**Threatened, Endangered, And Other Sensitive Species**

Dixie Sadler to advise.

**Reserve Pit Liner**

A 12 mil liner with felt is required. Please refer to the Monument Butte Field SOP.

**Location and Reserve Pit Reclamation**

Please refer to the Monument Butte Field SOP.

The following seed mixture will be used on the topsoil stockpile, to the recontoured surface of the reserve pit, and for final reclamation: (All poundages are in pure live seed)

Shadscale	<i>Atriplex confertifolia</i>	5 lbs/acre
Black Sage	<i>Artemisia Nova</i>	1 lbs/acre
Indian Rice Grass	<i>Oryzopsis Hyemoides</i>	6 lbs/acre

**Details of the On-Site Inspection**

The proposed Federal #3-33-8-18 was on-sited on 5/20/04. The following were present; Brad Mecham (NewfieldProduction), David Gerbig (Newfield Production), Byron Tolman (Bureau of Land Management). Weather conditions were clear.

13. **LESSEE'S OR OPERATORS REPRESENTATIVE AND CERTIFICATION**

**Representative**

Name: Brad Mecham

Address: Route #3 Box 3630  
Myton, UT 84052


Telephone: (435) 646-3721

Certification

Please be advised that NEWFIELD PRODUCTION COMPANY is considered to be the operator of well #3-33-8-18 NE/NW Section 33, Township 8S, Range 18E: Lease UTU-74872 Uintah County, Utah: and is responsible under the terms and conditions of the lease for the operations conducted upon the leased lands. Bond coverage is provided by Hartford Accident #4488944.

I hereby certify that the proposed drillsite and access route have been inspected; and I am familiar with the conditions which currently exist; that the statements made in this plan are true and correct to the best of my knowledge; and that the work associated with the operations proposed here will be performed by Inland Production Company and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.

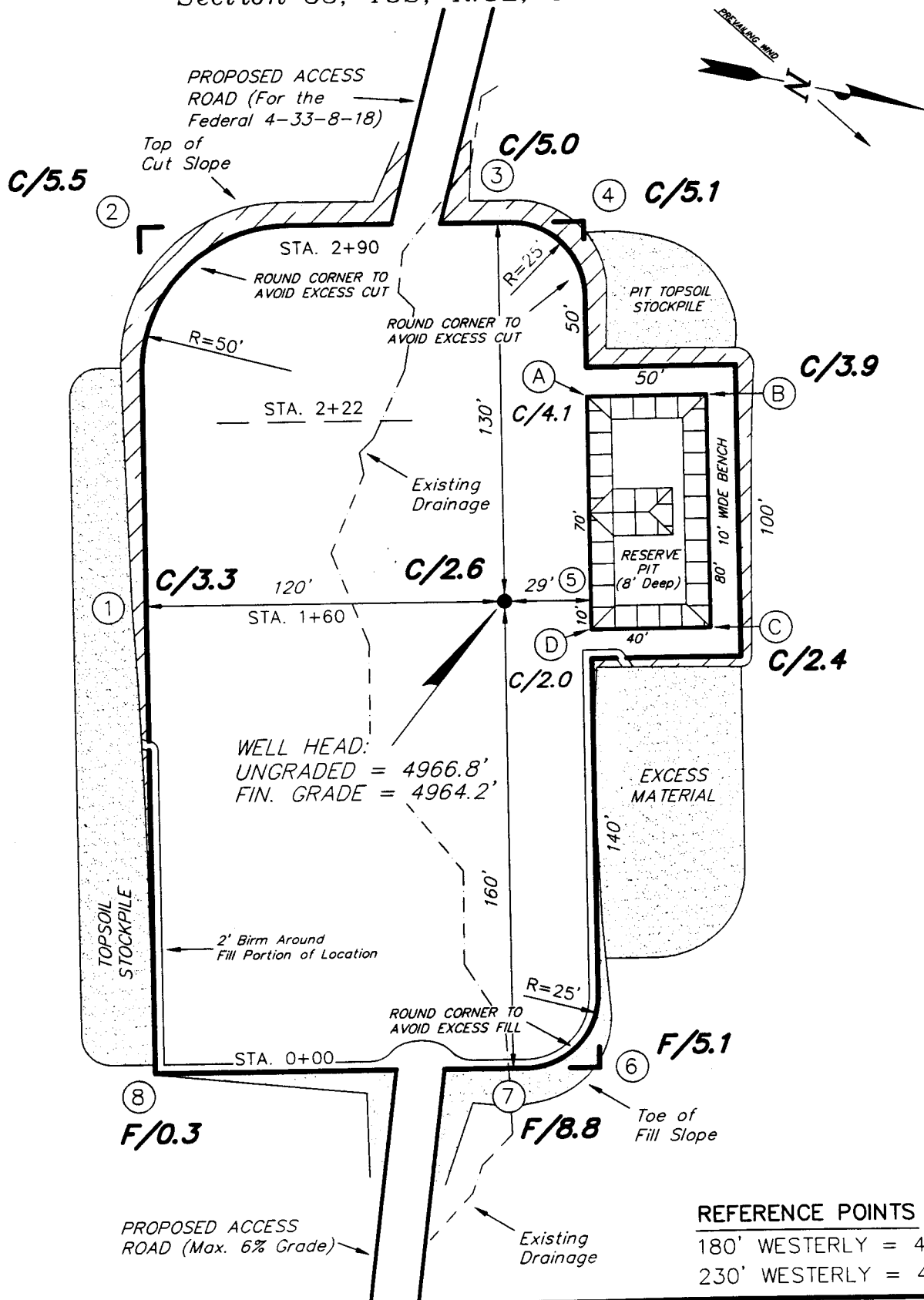
9-30-04  
Date

  
Lara Nebeker  
Production Clerk

# INLAND PRODUCTION COMPANY

FEDERAL 3-33-8-18

Section 33, T8S, R18E, S.L.B.&M.



SURVEYED BY: C.M.

SCALE: 1" = 50'

DRAWN BY: F.T.M.

DATE: 9-3-04

**Tri State**  
Land Surveying, Inc.

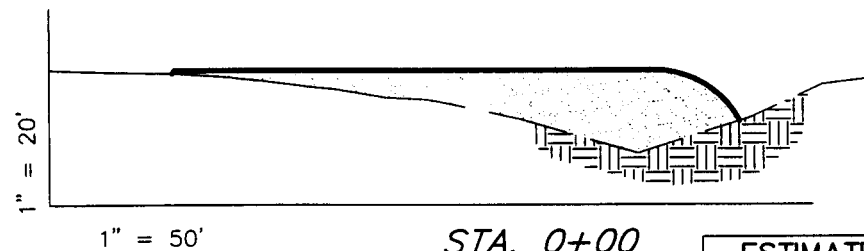
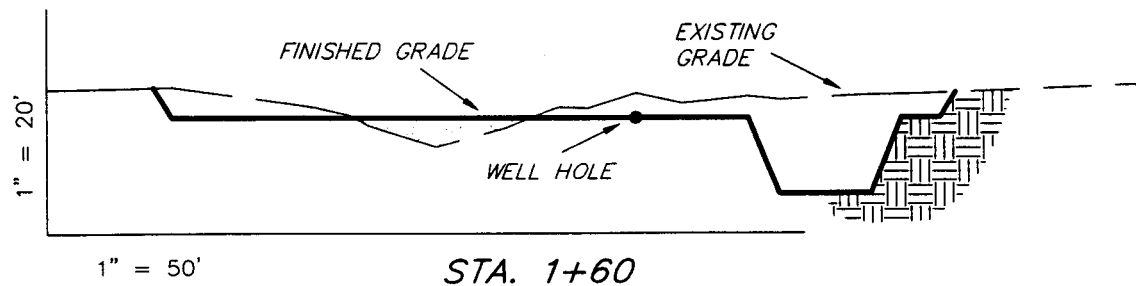
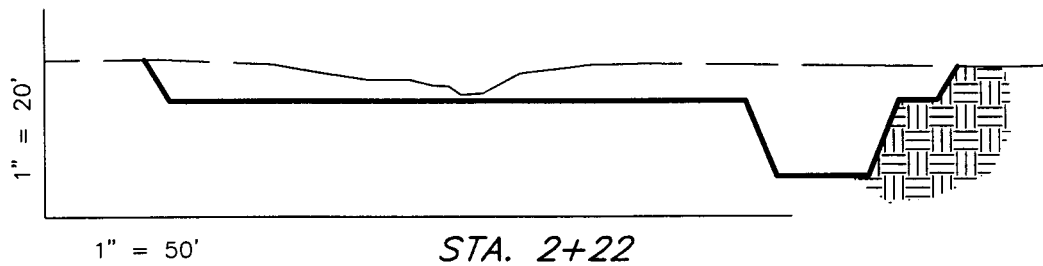
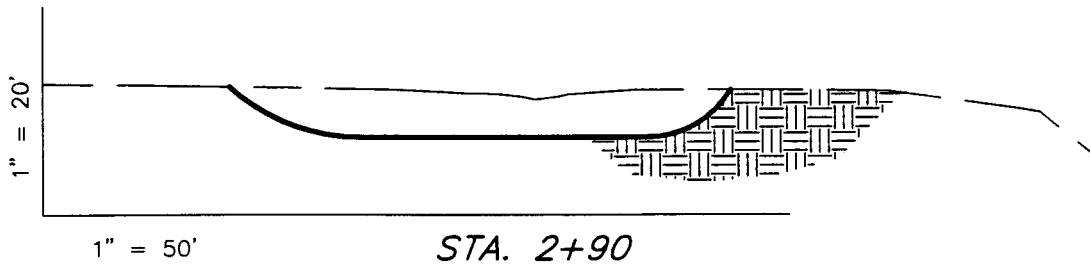
180 NORTH VERNAL AVE. VERNAL, UTAH 84078

(435) 781-2501

# INLAND PRODUCTION COMPANY

## CROSS SECTIONS

### FEDERAL 3-33-8-18



NOTE:  
UNLESS OTHERWISE NOTED  
ALL CUT/FILL SLOPES ARE  
AT 1.5:1

ESTIMATED EARTHWORK QUANTITIES (No Shrink or swell adjustments have been used) (Expressed in Cubic Yards)				
ITEM	CUT	FILL	6" TOPSOIL	EXCESS
PAD	2,530	2,530	Topsoil is not included in Pad Cut	0
PIT	640	0		640
TOTALS	3,170	2,530	890	640

SURVEYED BY: C.M.

SCALE: 1" = 50'

DRAWN BY: F.T.M.

DATE: 9-3-04

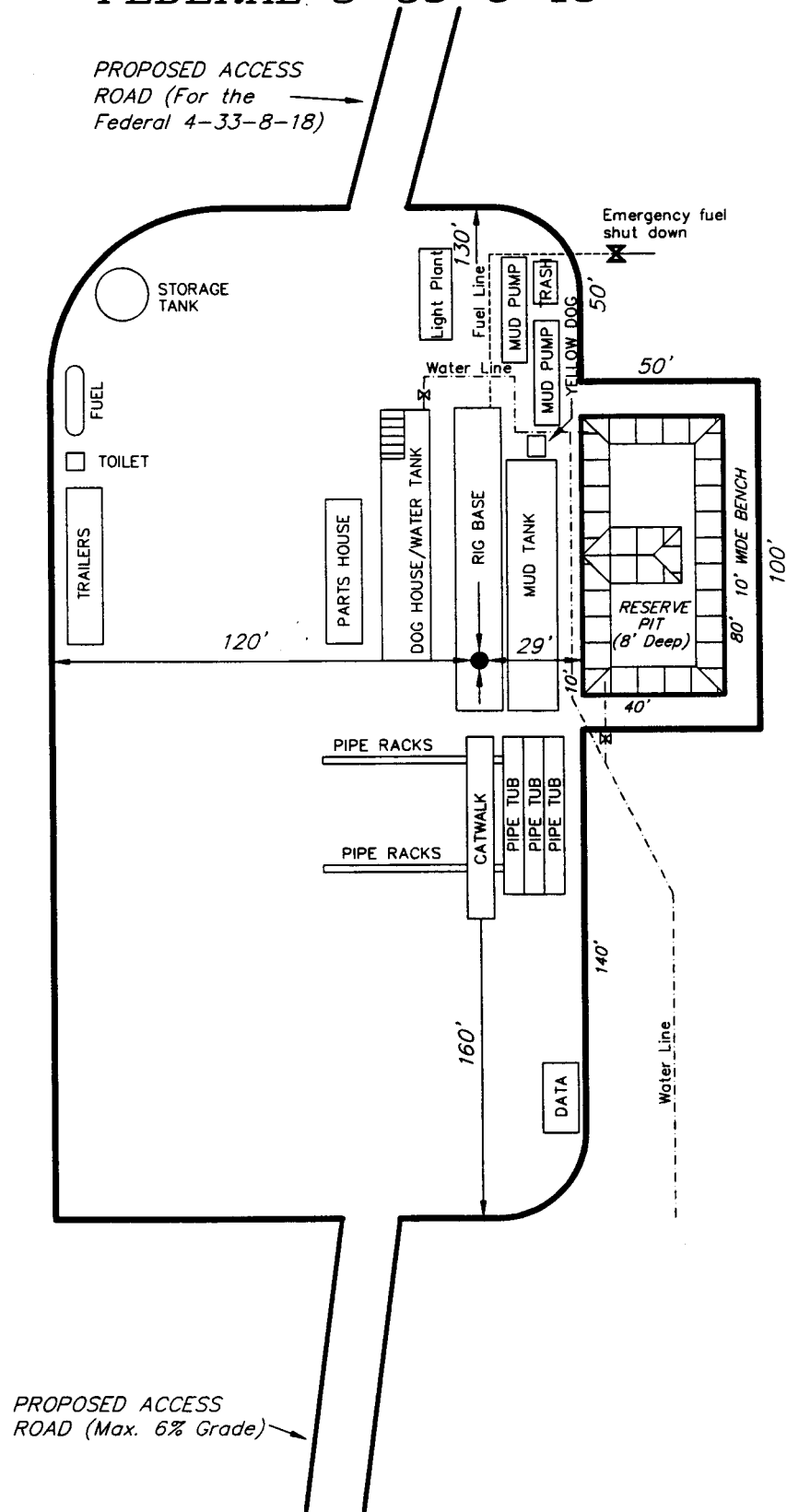
(435) 781-2501

**Tri State**  
Land Surveying, Inc.  
180 NORTH VERNAL AVE. VERNAL, UTAH 84078

# INLAND PRODUCTION COMPANY

## TYPICAL RIG LAYOUT

FEDERAL 3-33-8-18



PROPOSED ACCESS ROAD (Max. 6% Grade)

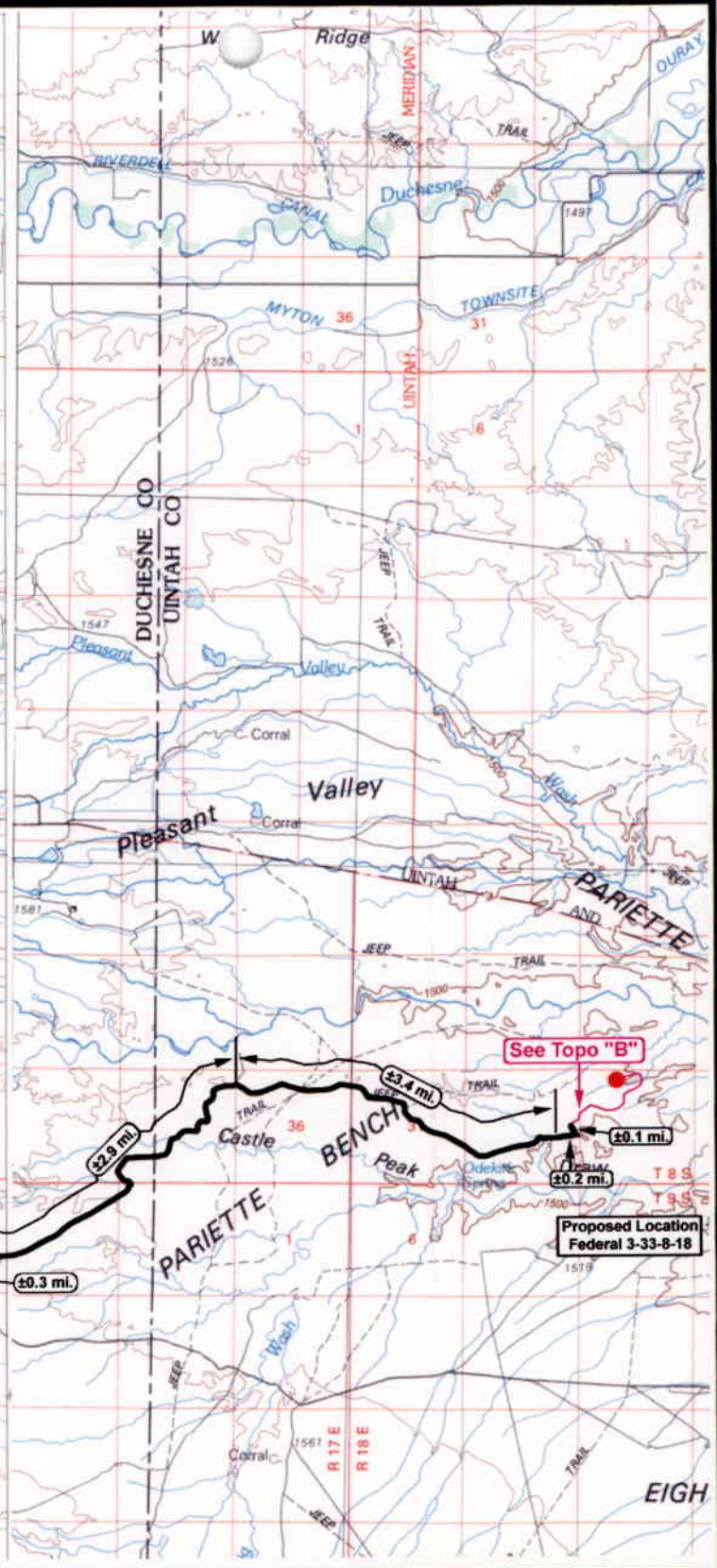
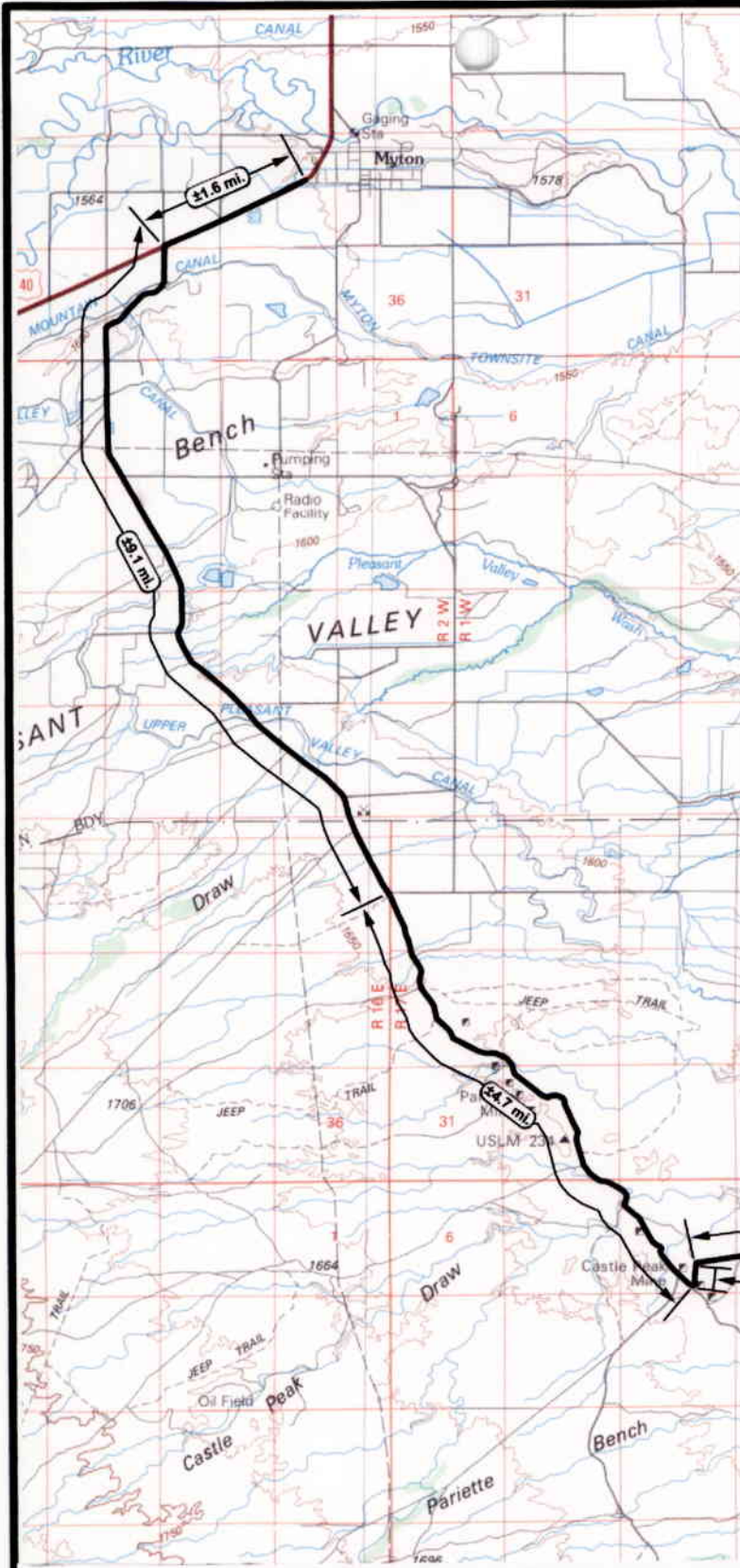
SURVEYED BY: C.M.

SCALE: 1" = 50'

DRAWN BY: F.T.M.

DATE: 9-3-04

**Tri State**  
Land Surveying, Inc.  
180 NORTH VERNAL AVE. VERNAL, UTAH 84078  
(435) 781-2501



**Federal 3-33-8-18**  
**SEC. 33, T8S, R18E, S.L.B.&M.**



**Tri-State**  
**Land Surveying Inc.**  
 (435) 781-2501  
 38 West 100 North Vernal, Utah 84078

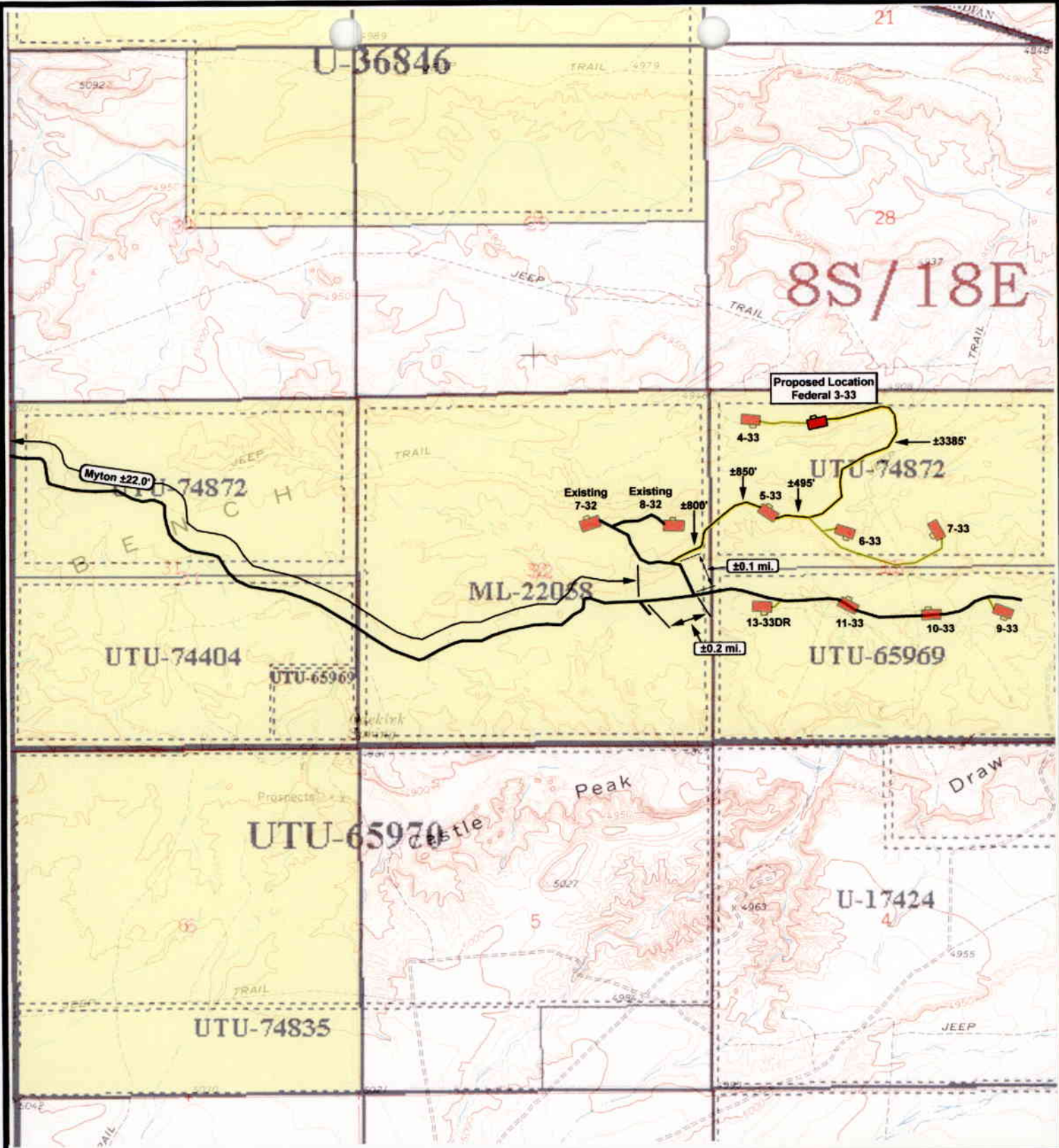
**SCALE:** 1" = 100,000'  
**DRAWN BY:** bgm  
**DATE:** 09-09-2004

**Legend**

**Existing Road**  
**Proposed Access**

**TOPOGRAPHIC MAP**

**"A"**



**Federal 3-33-8-18**  
**SEC. 33, T8S, R18E, S.L.B.&M.**



**Tri-State**  
**Land Surveying Inc.**  
 (435) 781-2501  
 38 West 100 North Vernal, Utah 84078

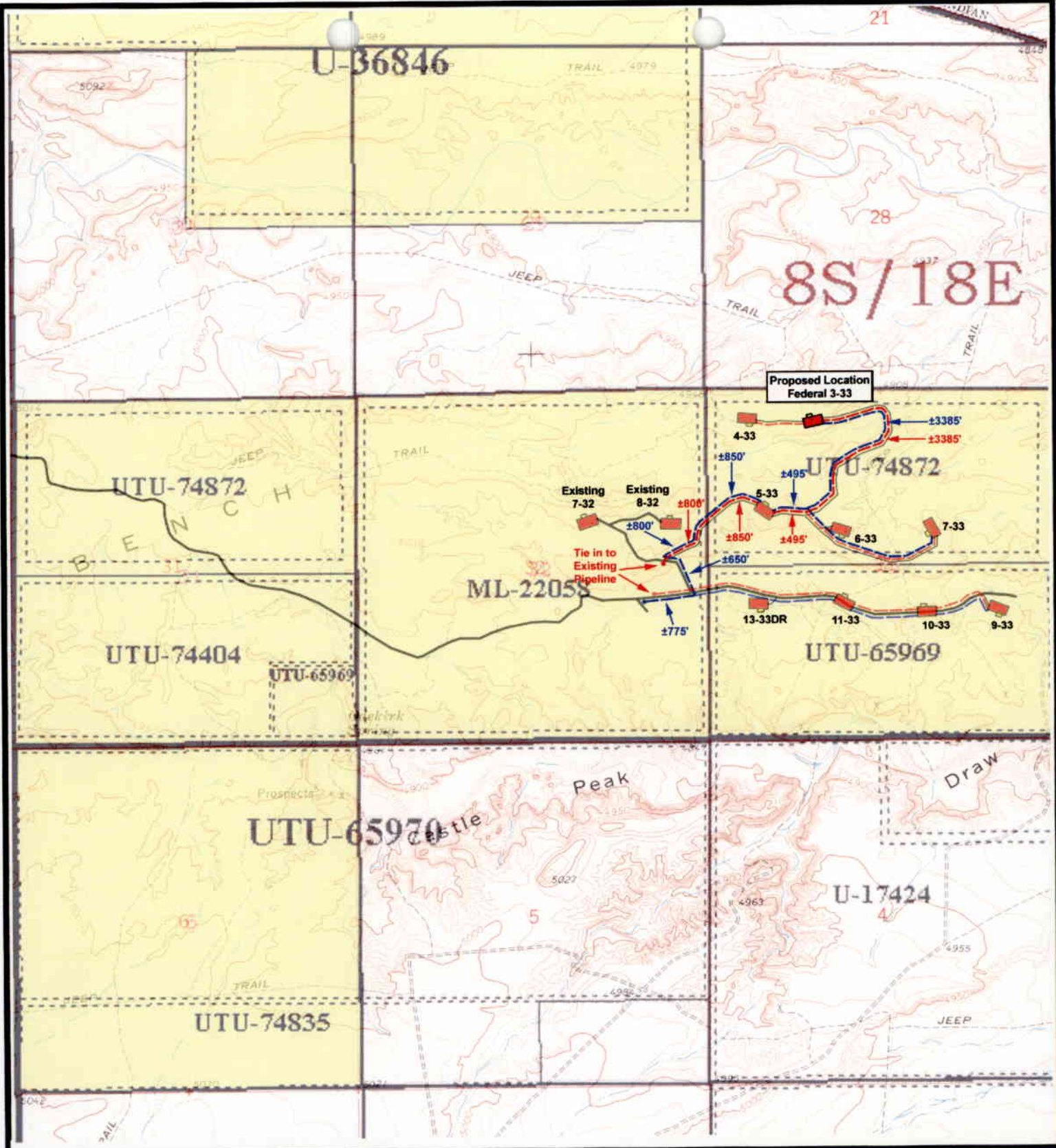
SCALE: 1" = 2000'  
 DRAWN BY: bgm  
 DATE: 09-09-2004

**Legend**

- Existing Road
- Proposed Access

TOPOGRAPHIC MAP

**"B"**



**Federal 3-33-8-18**  
**SEC. 33, T8S, R18E, S.L.B.&M.**



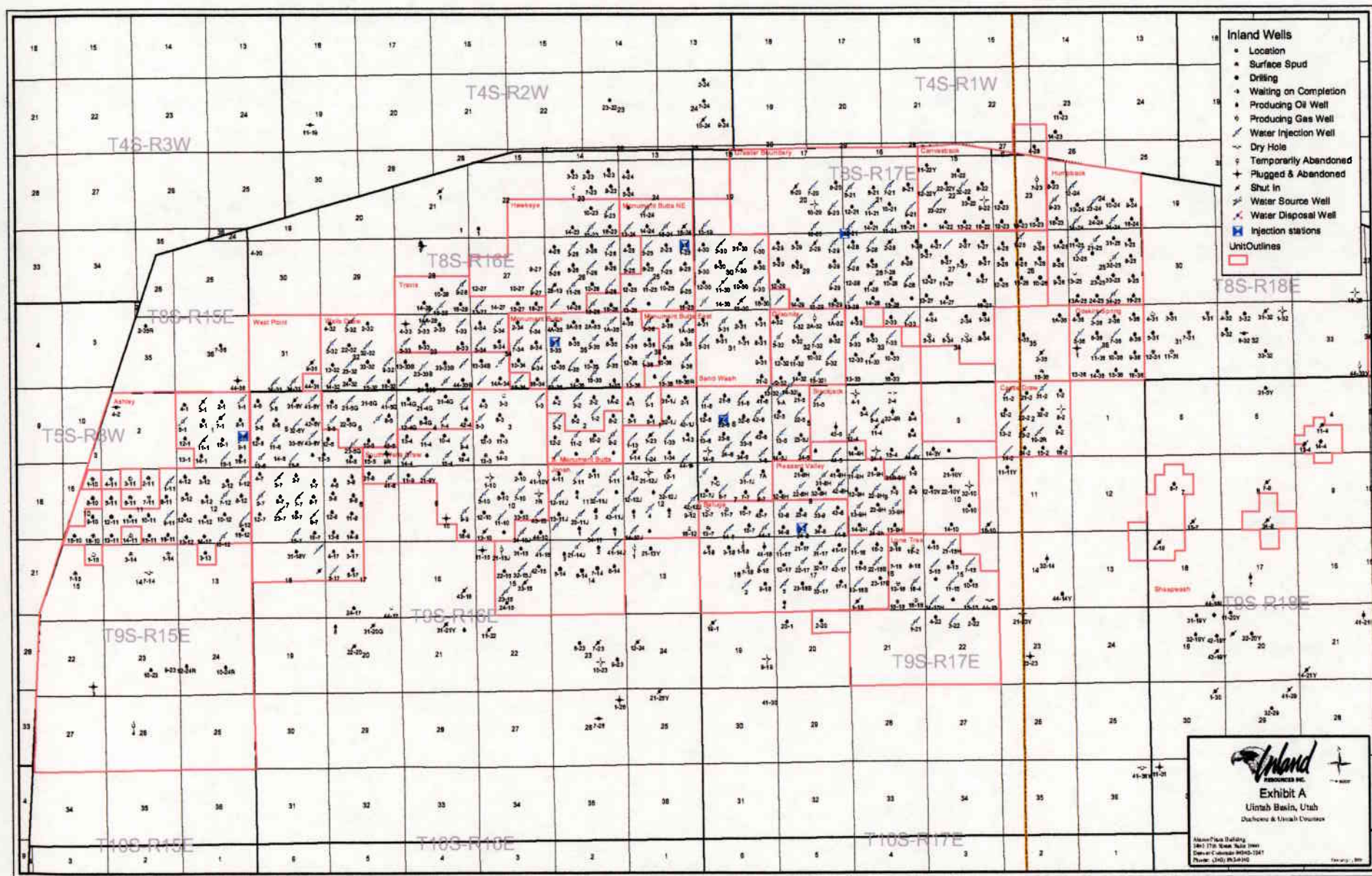
**Tri-State**  
*Land Surveying Inc.*  
 (435) 781-2501  
 38 West 100 North Vernal, Utah 84078

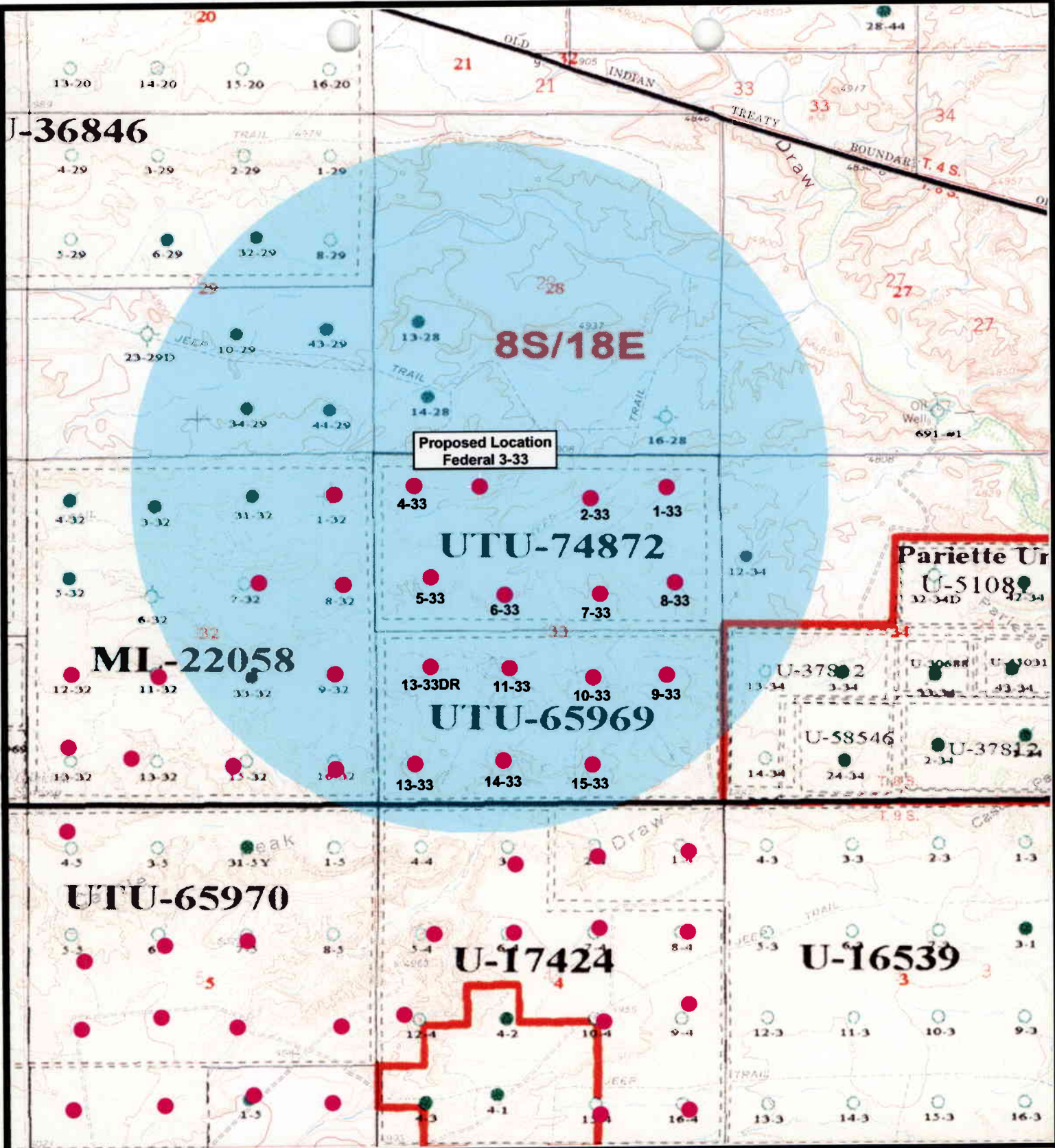
**SCALE: 1" = 2000'**  
**DRAWN BY: bgm**  
**DATE: 09-09-2004**

Legend	
	Existing Road
	Proposed Access
	Proposed Gas Line
	Proposed Water Line

**TOPOGRAPHIC MAP**

**"C"**





**Federal 3-33-8-18  
SEC. 33, T8S, R18E, S.L.B.&M.**



**Tri-State  
Land Surveying Inc.**  
(435) 781-2501  
180 North Vernal Ave. Vernal, Utah 84078

**SCALE: 1" = 2,000'**  
**DRAWN BY: bgm**  
**DATE: 09-09-2004**

**Legend**

- Well Locations
- One-Mile Radius

**Exhibit "B"**

## 2-M SYSTEM

Blowout Prevention Equipment Systems

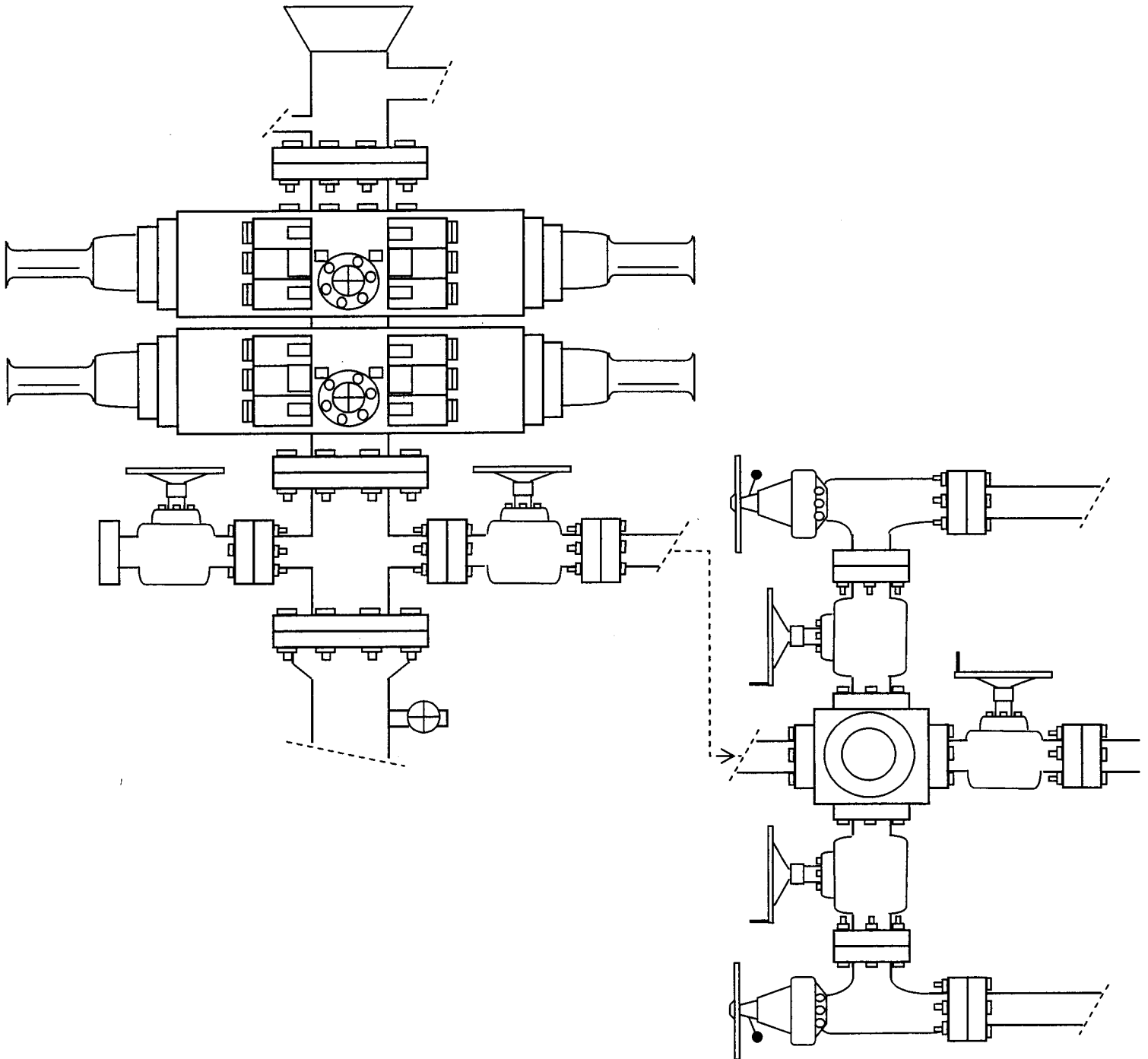


EXHIBIT C

CULTURAL RESOURCE INVENTORY OF  
INLAND PRODUCTIONS PARCEL IN  
T 8 S, R 18 E, SEC. 33 AND  
T 9 S, R 18 E, SEC. 3 & 4,  
UINTAH COUNTIES, UTAH

BY:

Katie Simon  
and  
Keith R. Montgomery

Prepared For:

Bureau of Land Management  
Vernal Field Office

Prepared Under Contract With:

Inland Production  
Route 3, Box 3630  
Myton, UT 84052

Prepared By:

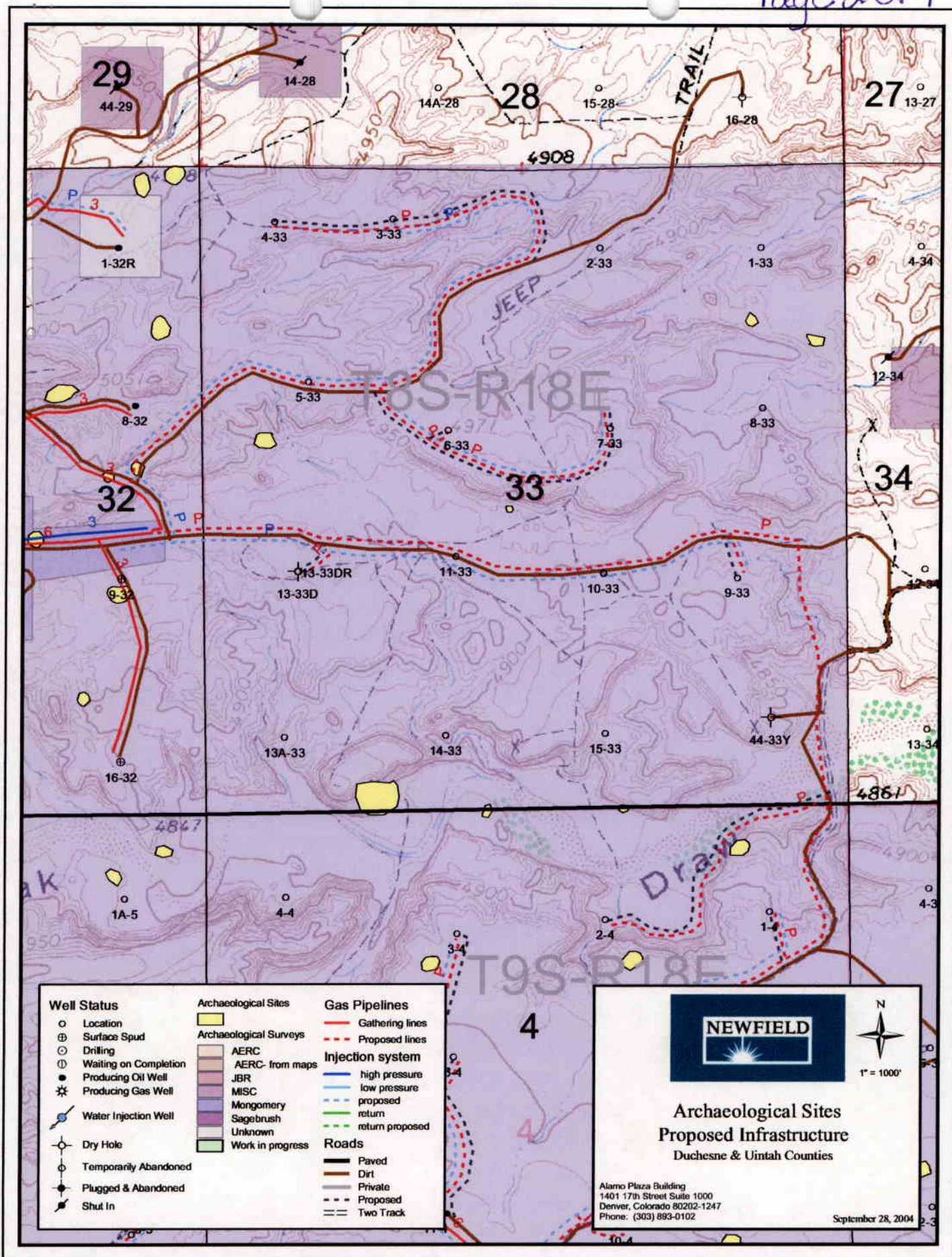
Montgomery Archaeological Consultants  
P.O. Box 147  
Moab, Utah 84532

MOAC Report No. 03-154

February 3, 2004

United States Department of Interior (FLPMA)  
Permit No. 03-UT-60122

State of Utah Antiquities Project (Survey)  
Permit No. U-03-MQ-0799b



**INLAND RESOURCES, INC.**

**PALEONTOLOGICAL FIELD SURVEY OF PROPOSED  
PRODUCTION DEVELOPMENT AREAS,  
UINTAH COUNTY, UTAH**

(Section 33, T 8 S, R 18 E; & Section 6, T 9 S, R 19 E)

**REPORT OF SURVEY**

Prepared for:

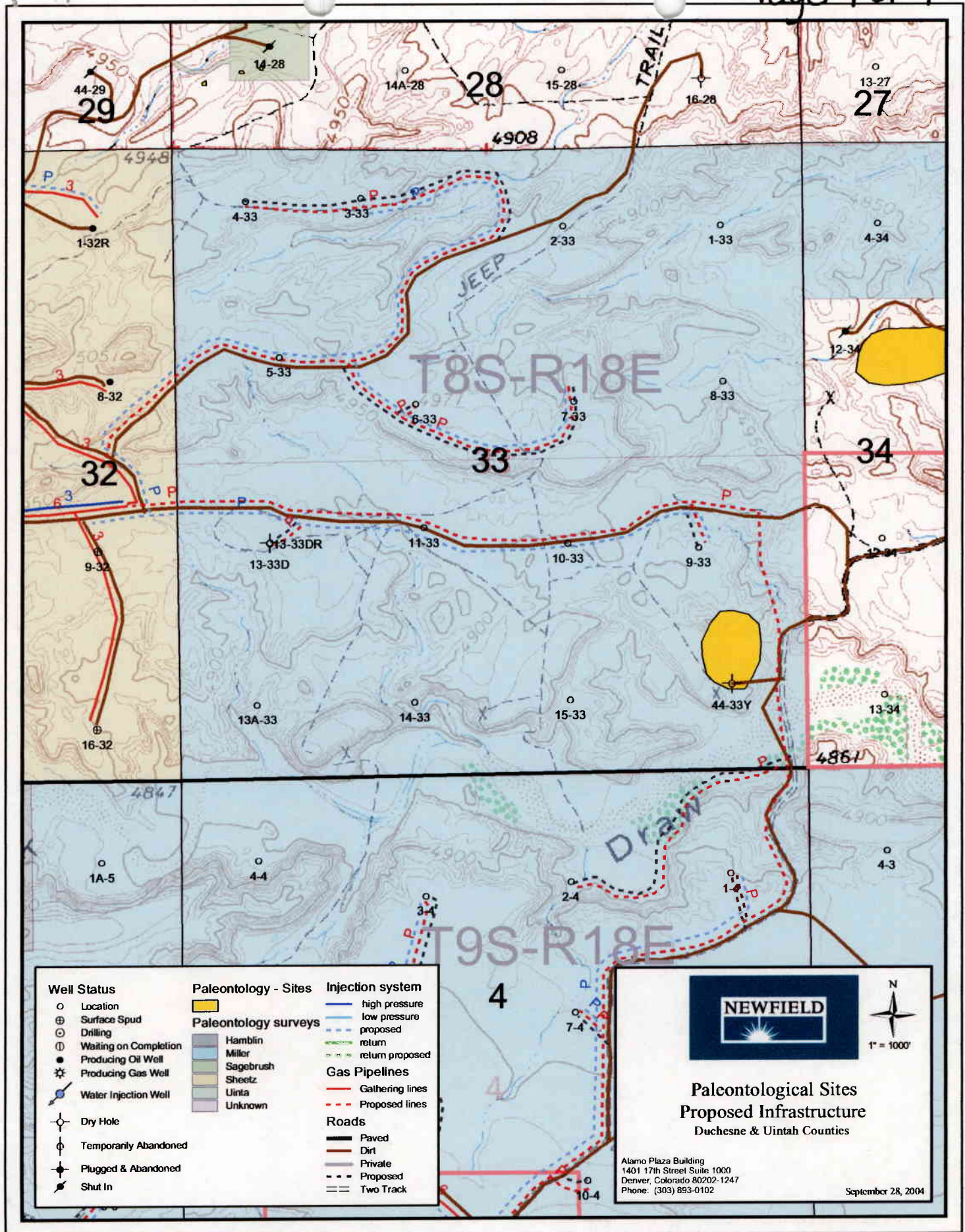
**Inland Resources, Inc.**

Prepared by:

Wade E. Miller

Consulting Paleontologist

May 12, 2004



Well Status	Paleontology - Sites	Injection system
○ Location	Paleontology surveys	high pressure
⊕ Surface Spud	Hamblin	low pressure
⊙ Drilling	Sagebrush	proposed
⊖ Waiting on Completion	Uinta	return
● Producing Oil Well	Unknown	return proposed
⊛ Producing Gas Well		<b>Gas Pipelines</b>
⊖ Water Injection Well		Gathering lines
⊖ Dry Hole		Proposed lines
⊖ Temporarily Abandoned		<b>Roads</b>
⊖ Plugged & Abandoned		Paved
⊖ Shut In		Dirt
		Private
		Proposed
		Two Track



**Paleontological Sites  
Proposed Infrastructure**  
Duchesne & Uintah Counties

Alamo Plaza Building  
1401 17th Street Suite 1000  
Denver, Colorado 80202-1247  
Phone: (303) 893-0102

1" = 1000'

September 28, 2004

Form 3160-3  
(September 2001)UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

## APPLICATION FOR PERMIT TO DRILL OR REENTER

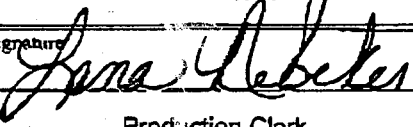
FORM APPROVED  
OMB No. 1004-0136  
Expires January 31, 2004

1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. UTU-74872
1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name N/A
2. Name of Operator Newfield Production Company		7. If Unit or CA Agreement, Name and No. N/A
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4. Location of Well (Re. or location clearly and in accordance with any State requirements. *) At surface NE/4 V 272 FNL 1594' FWL At proposed prod. zone 425		9. API Well No.
14. Distance in miles and direction from nearest town or post office* Approximately 22.3 miles south of Myton, Utah		10. Field and Pool, or Exploratory
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drg unit line, if any) Approx. 425' then, 485' then	16. No. of Acres in lease 577.35	11. Sec., T., R., M., or Bld. and Survey or Area NE/NW Sec. 33, T8S R18E
17. Spacing Unit dedicated to this well 40 Acres	18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. Approx. 985'	12. County or Parish Uintah
19. Proposed Depth 6500'	20. BLM/BIA Bond No. on file UTU0056	13. State UT
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 4966.8' GL	22. Approximate date work will start* 1st Quarter 2005	23. Estimated duration Approximately seven (7) days from start to rig release.

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- Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
- Operator certification.
- Such other site specific information and/or plans as may be required by the authorized officer.

25. Signature 	Name (Printed/Typed) Lana Meheker	Date 9-30-04
Title Production Clerk		

Approved by (Signature)	Name (Printed/Typed)	Date
Title	Officer	

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

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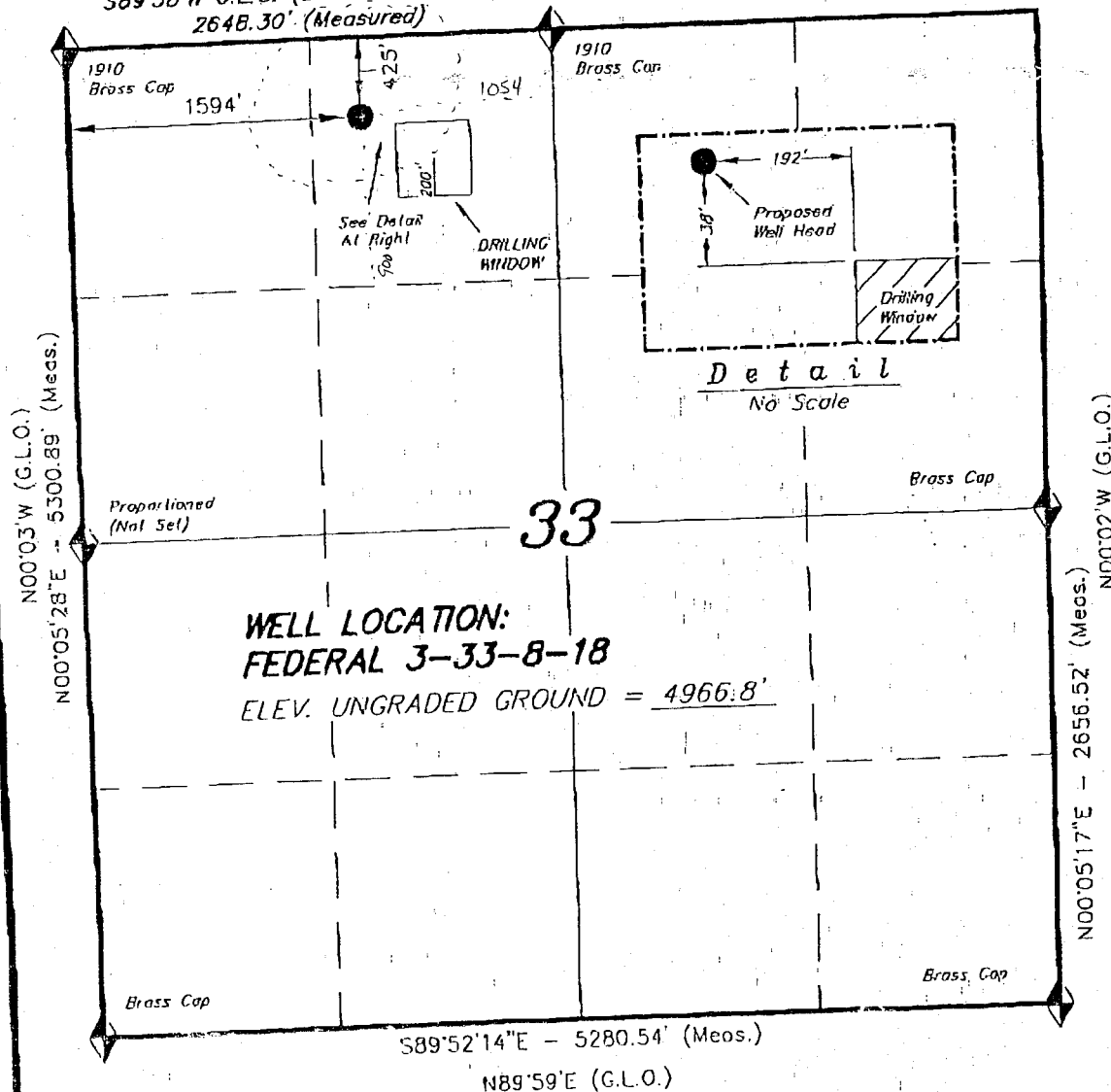
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

\*(Instructions on reverse)

# T8S, R18E, S.L.B.&M.

589°58'W - 80.02 (G.L.O.)

589°58'W G.L.O. (Basis of Bearings)  
2648.30' (Measured)

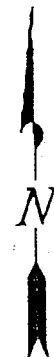


◆ = SECTION CORNERS LOCATED

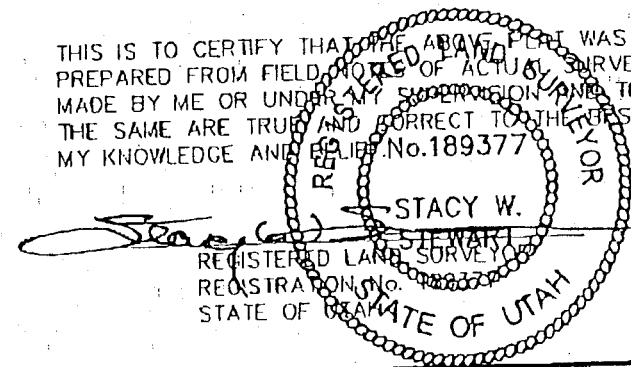
BASIS OF ELEV; U.S.G.S. 7-1/2 min QUAD (PARIETTE DRAW SW)

## INLAND PRODUCTION COMPANY

WELL LOCATION, FEDERAL 3-33-8-18,  
LOCATED AS SHOWN IN THE NE 1/4 NW  
1/4 OF SECTION 33, T8S, R18E,  
S.L.B.&M. UTAH COUNTY, UTAH.



THIS IS TO CERTIFY THAT THE ABOVE PLAN WAS  
PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS  
MADE BY ME OR UNDER MY SUPERVISION AND THAT  
THE SAME ARE TRUE AND CORRECT TO THE BEST OF  
MY KNOWLEDGE AND BELIEF. No. 189377



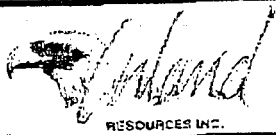
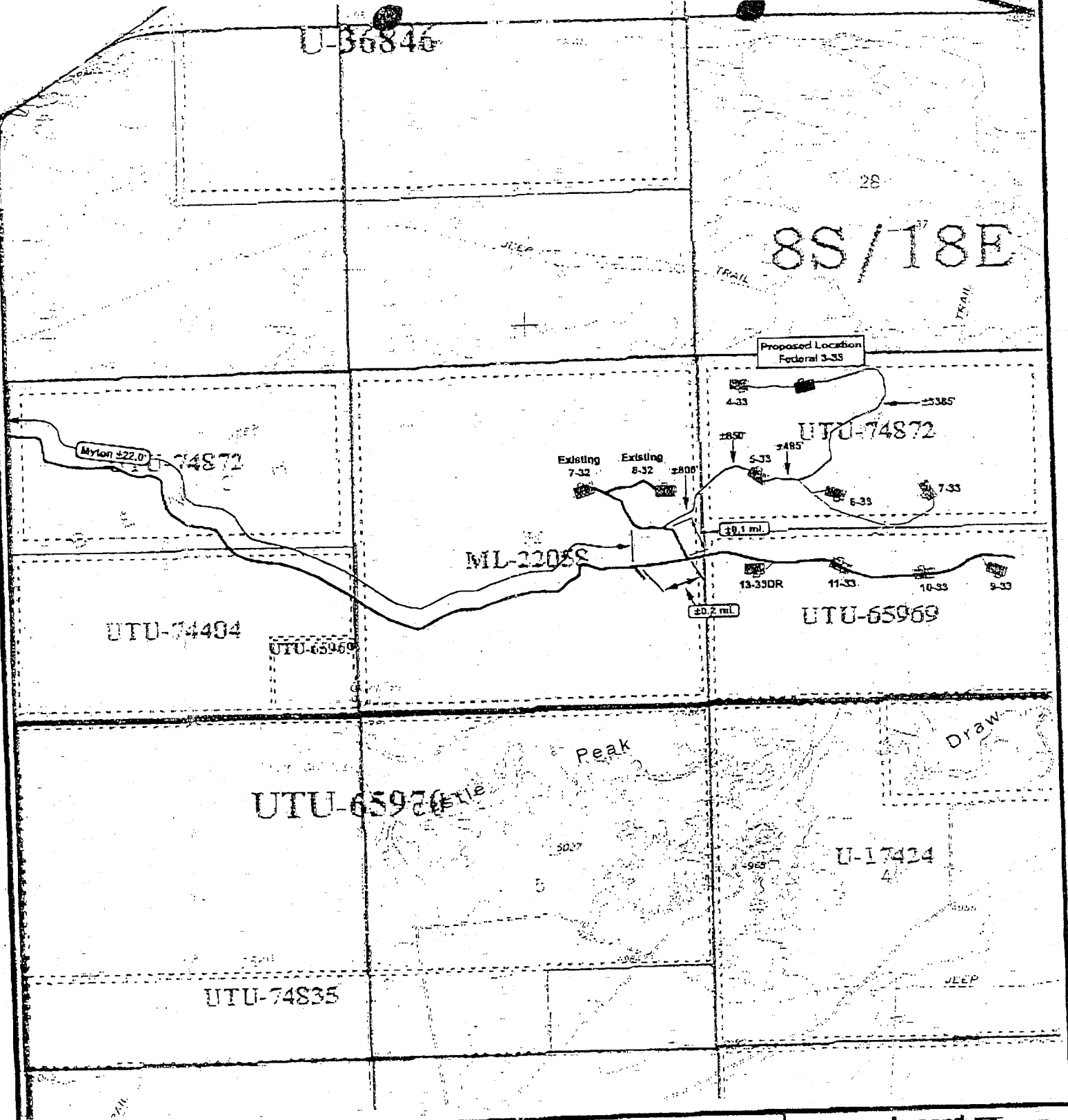
**TRI STATE LAND SURVEYING & CONSULTING**  
180 NORTH VERNAL AVE. - VERNAL, UTAH 84078  
(435) 781-2501

SCALE: 1" = 1000'	SURVEYED BY: C.M.
DATE: 9-3-04	DRAFTED BY: F.T.M.
NOTES:	FILE #

U-36846

28

8S/18E



Federal 3-33-8-18  
SEC. 33, T8S, R18E, S.L.B.&M.

*Tri-State*  
*Land Surveying Inc.*  
(435) 781-2501  
35 West 100 North Vernal, Utah 84078

SCALE: 1"=2000'

DRAWN BY: bgm

DATE: 09-09-2004

Legend

Existing Road  
Proposed Access

TOPOGRAPHIC MAP

"B"

# NEWFIELD



September 30, 2004

State of Utah  
Division of Oil, Gas & Mining  
Attn: Diana Whitney  
1594 West North Temple - Suite 1210  
P.O. Box 145801  
Salt Lake City, Utah 84114-5801

RE: Applications for Permit to Drill:

Federal 3-33-8-18 ✓  
Federal 4-33-8-18  
Federal 5-33-8-18  
Federal 6-33-8-18  
Federal 7-33-8-18  
Federal 9-33-8-18  
Federal 10-33-8-18  
Federal 11-33-8-18

RECEIVED  
OCT 04 2004  
DIV. OF OIL, GAS & MINING

Dear Diana:

Enclosed find APD's on the above referenced wells. The 8-13-9-16 and 13-13-9-16 are Exception Locations. I have contacted our Land Department in the Denver office and they will be providing you with the appropriate Exception Location Letters. If you have any questions, feel free to give either Brad or myself a call.

Sincerely,

Lana Nebeker  
Production Clerk

enclosures

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
OMB No. 1004-0136  
Expires January 31, 2004

001

APPLICATION FOR PERMIT TO DRILL OR REENTER

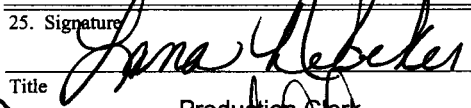
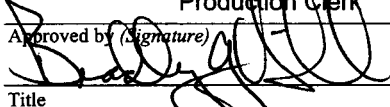
5. Lease Serial No. UTU-74872
6. If Indian, Allottee or Tribe Name N/A
7. If Unit or CA Agreement, Name and No. N/A
8. Lease Name and Well No. Federal 3-33-8-18
9. API Well No. 43-047-35979
10. Field and Pool, or Exploratory Eight Mile Flat North
11. Sec., T., R., M., or Blk. and Survey or Area NE/NW Sec. 33, T8S R18E
12. County or Parish Uintah
13. State UT

1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		
1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		
2. Name of Operator Newfield Production Company		
3a. Address Route #3 Box 3630, Myton UT 84052	3b. Phone No. (include area code) (435) 646-3721	
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface NE/NW 425' FNL 1594' FWL 593604 Y 40.080613 At proposed prod. zone 4437073 Y -109.901456		
14. Distance in miles and direction from nearest town or post office* Approximatley 22.3 miles south of Myton, Utah		
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) Approx. 425' f/lse, 4855' f/unit	16. No. of Acres in lease 677.36	17. Spacing Unit dedicated to this well 40 Acres
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. Approx. 965'	19. Proposed Depth 6500'	20. BLM/BIA Bond No. on file UTU0056
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 4966.8' GL	22. Approximate date work will start* 1st Quarter 2005	23. Estimated duration Approximately seven (7) days from spud to rig release.

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, shall be attached to this form:

- |   |  |
|---|--|
| 1. Well plat certified by a registered surveyor.  | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).    |
| 2. A Drilling Plan.   | 5. Operator certification.   |
| 3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office). | 6. Such other site specific information and/or plans as may be required by the authorized officer. |

25. Signature 	Name (Printed/Typed) Lana Nebeker	Date 9-30-04
Title Production Clerk		
Approved by (Signature) 	Name (Printed/Typed) BRADLEY G. HILL ENVIRONMENTAL SCIENTIST III	Date 10-06-05
Title		

Application approval does not warrant or certify the the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Conditions of approval, if any, are attached.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

\*(Instructions on reverse)

Federal Approval of this  
Action is Necessary

RECEIVED

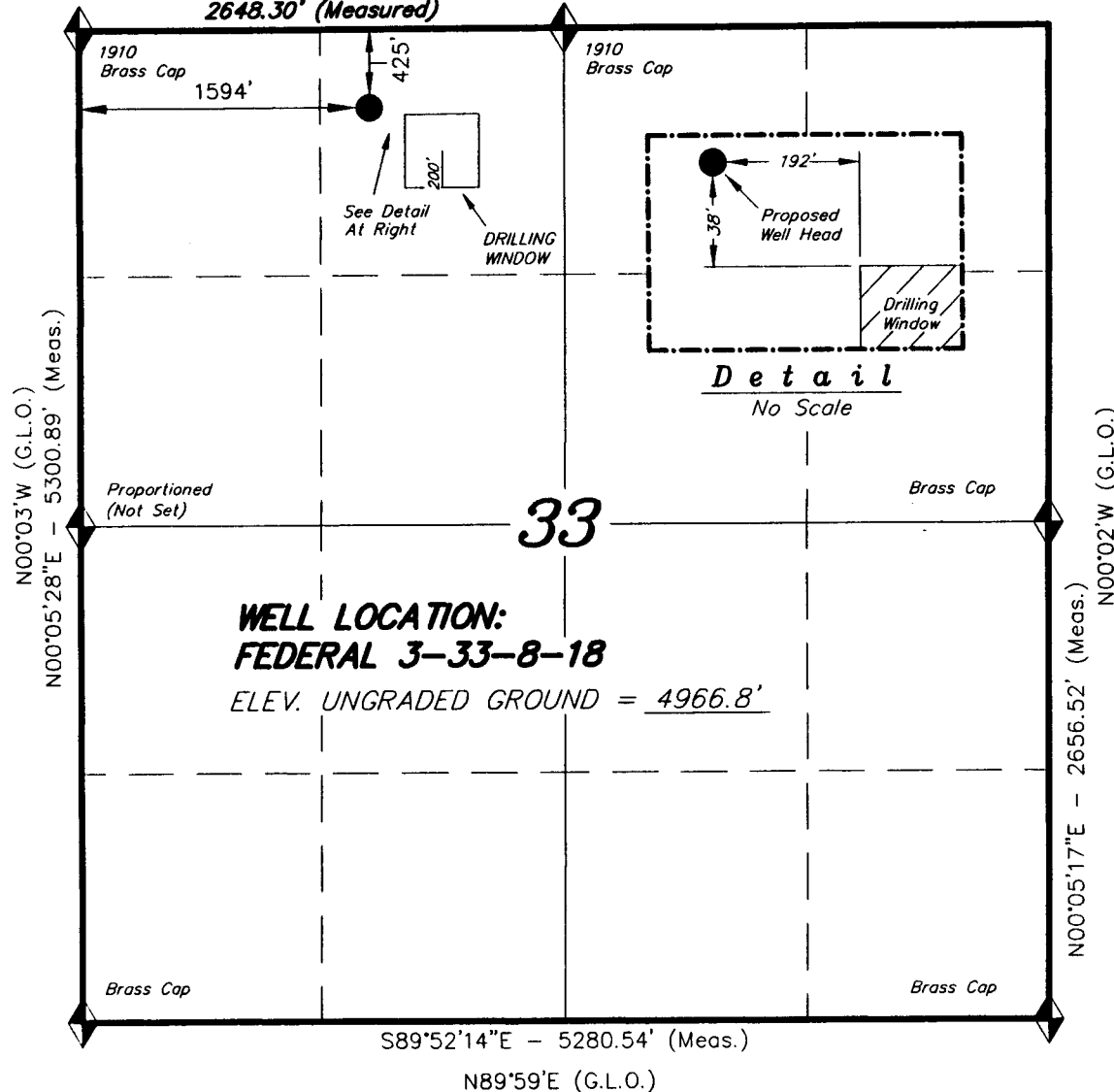
OCT 04 2004

DIV. OF OIL, GAS & MINING

# T8S, R18E, S.L.B.&M.

S89°58'W - 80.02 (G.L.O.)

S89°58'W G.L.O. (Basis of Bearings)  
2648.30' (Measured)



= SECTION CORNERS LOCATED

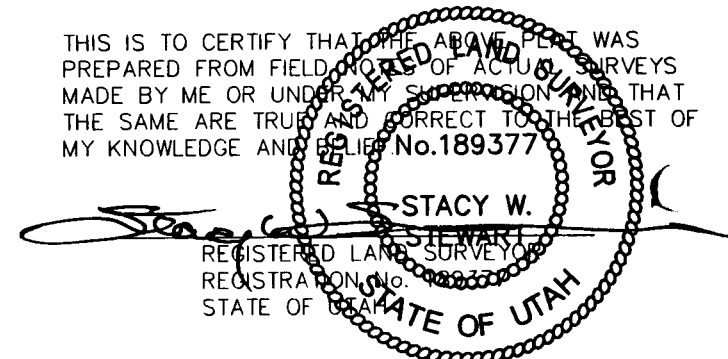
BASIS OF ELEV; U.S.G.S. 7-1/2 min QUAD (PARIETTE DRAW SW)

## INLAND PRODUCTION COMPANY

WELL LOCATION, FEDERAL 3-33-8-18,  
LOCATED AS SHOWN IN THE NE 1/4 NW  
1/4 OF SECTION 33, T8S, R18E,  
S.L.B.&M. UTAH COUNTY, UTAH.



THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS  
PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS  
MADE BY ME OR UNDER MY SUPERVISION AND THAT  
THE SAME ARE TRUE AND CORRECT TO THE BEST OF  
MY KNOWLEDGE AND BELIEF. No. 189377



## TRI STATE LAND SURVEYING & CONSULTING

180 NORTH VERNAL AVE. - VERNAL, UTAH 84078  
(435) 781-2501

SCALE: 1" = 1000'

SURVEYED BY: C.M.

DATE: 9-3-04

DRAFTED BY: F.T.M.

NOTES:

FILE #

WORKSHEET  
APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 10/04/2004

API NO. ASSIGNED: 43-047-35979

WELL NAME: FEDERAL 3-33-8-18

OPERATOR: NEWFIELD PRODUCTION ( N2695 )

CONTACT: LANA NEBEKER

PHONE NUMBER: 435-646-3721

## PROPOSED LOCATION:

NENW 33 080S 180E

SURFACE: 0425 FNL 1594 FWL

BOTTOM: 0425 FNL 1594 FWL

UINTAH

8 MILE FLAT NORTH ( 590 )

LEASE TYPE: 1 - Federal

LEASE NUMBER: UTU-74872

SURFACE OWNER: 1 - Federal

PROPOSED FORMATION: GRRV

COALBED METHANE WELL? NO

INSPECT LOCATN BY: / /

Tech Review	Initials	Date
Engineering		
Geology		
Surface		

LATITUDE: 40.08061

LONGITUDE: -109.9015

## RECEIVED AND/OR REVIEWED:

☒ Plat☒ Bond: Fed[1] Ind[] Sta[] Fee[]

(No. UTU0056 )

☒ Potash (Y/N)☒ Oil Shale 190-5 (B) or 190-3 or 190-13☒ Water Permit

(No. MUNICIPAL )

☒ RDCC Review (Y/N)

(Date: )

☒ Fee Surf Agreement (Y/N)

## LOCATION AND SITING:

R649-2-3.

Unit

R649-3-2. General

Siting: 460 From Qtr/Qtr &amp; 920' Between Wells

☒ R649-3-3. Exception

Drilling Unit

Board Cause No:

Eff Date:

Siting:

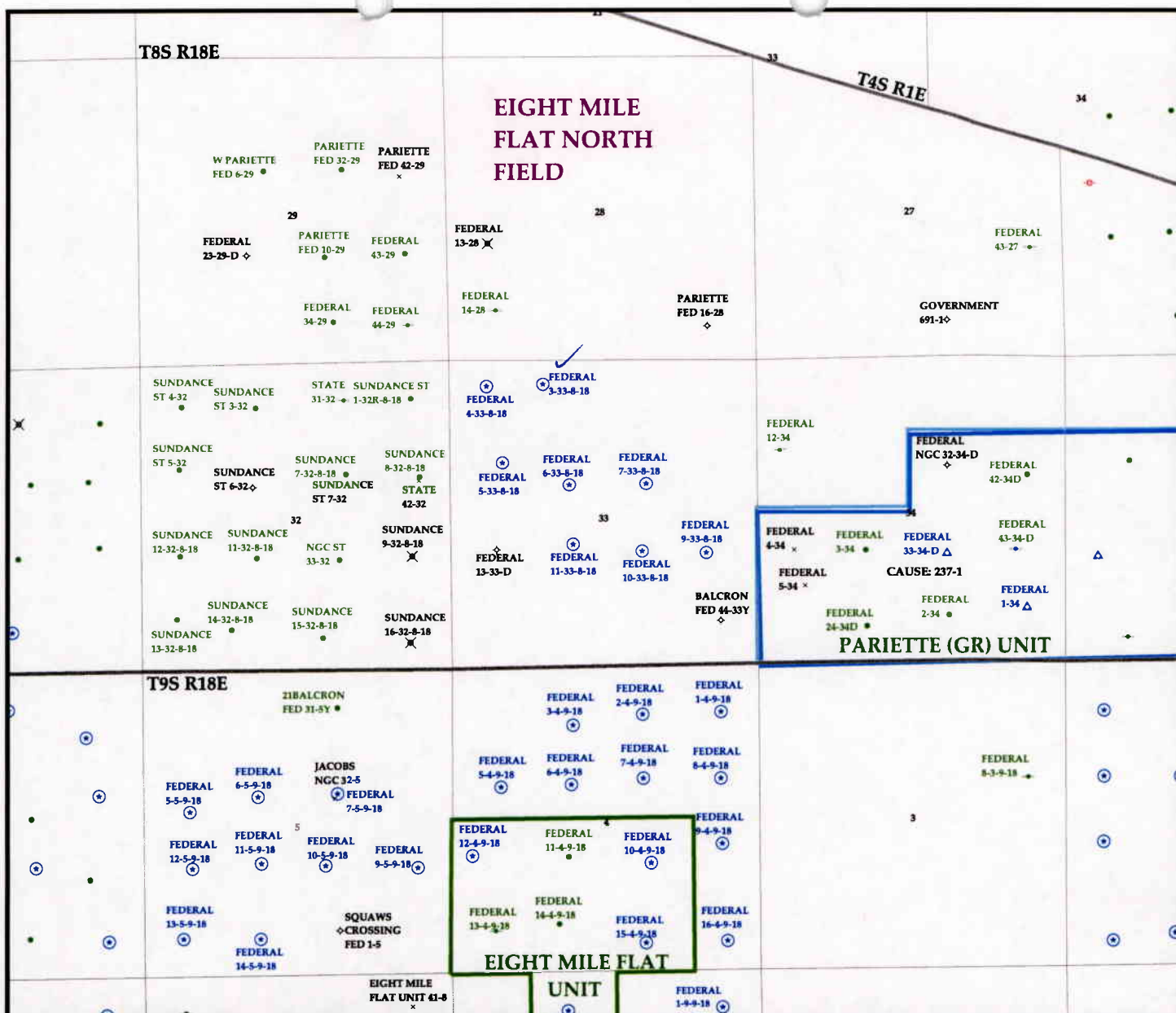
R649-3-11. Directional Drill

## COMMENTS:

Sep, Separate file

## STIPULATIONS:

1- Federal Approval  
2- Spacing Strip



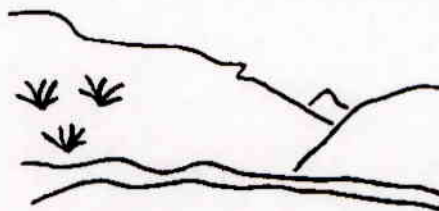
OPERATOR: NEWFIELD PROD CO (N2695)

SEC. 33 T.8S R.18E

FIELD: EIGHT MILE NORTH FLAT (590)

COUNTY: UTAH

SPACING: R649-3-3 / EXCEPTION LOCATION



Utah Oil Gas and Mining

Wells	Units.shp	Fields.shp
GAS INJECTION	EXPLORATORY	ABANDONED
GAS STORAGE	GAS STORAGE	ACTIVE
LOCATION ABANDONED	NF PP OIL	COMBINED
NEW LOCATION	NF SECONDARY	INACTIVE
PLUGGED & ABANDONED	PENDING	PROPOSED
PRODUCING GAS	PI OIL	STORAGE
PRODUCING OIL	PP GAS	TERMINATED
SHUT-IN GAS	PP GEOTHERML	
SHUT-IN OIL	PP OIL	
TEMP. ABANDONED	SECONDARY	
TEST WELL	TERMINATED	
WATER INJECTION		
WATER SUPPLY		
WATER DISPOSAL		



PREPARED BY: DIANA WHITNEY  
DATE: 5-OCTOBER-2004

## NEWFIELD



December 29, 2004

Utah Division of Oil, Gas & Mining  
P.O. Box 145801  
Attn: Diana Whitney  
Salt Lake City, Utah 84114-5801

RECEIVED  
JAN 06 2005  
DIV. OF OIL, GAS & MINING

Re: Exception Locations: Federal 3-33-8-18  
Federal 4-33-8-18; Uintah Cty., Utah  
Lease UTU-7:74872

Dear Ms. Whitney:

Pursuant to Rule R649-3-3 of the Oil & Gas Rules and Regulations of the State of Utah, Newfield Production Company, as contract Operator for Wildrose Resources Corporation, hereby requests exception locations for the drilling of the captioned wells. Rule R649-3-2 requires a well to be located in the center of a forty (40) acre quarter-quarter section, or a substantially equivalent lot or tract, with a tolerance of two hundred (200) feet in any direction from the center.

Fed 4-33-8-18; 455' FNL, 627' FWL Sec 33-T8S-R18E; specifically, the location is 38' north of the drilling window. This location is requested due to extreme terrain conditions.

Federal 3-33-8-18; 425' FNL, 1594' FWL Sec 33-T8S-R18E; specifically the location is 36' north and 192' east of the drilling window. The exception location is requested due to extreme terrain conditions.

For your reference enclosed please find the attached plats which depict the proposed drillsite locations and illustrate the deviation from the drilling windows, in accordance with Rule R649-3-2.

Please note the locations are completely within Federal lease UTU-7:74872. The lease where the drillsites are located is owned 100% by Wildrose Resources Corporation. The offsetting acreage within a four hundred sixty foot (460') radius of the proposed locations is owned by Wildrose Resources Corporation, Thomas J. Lambert, Larry R. Simpson, Montana & Wyoming Oil Co., John R. Warne, John F. Jennings, Great Northern Drilling Co., Lambert Trust, dtd 9-13-91, Carrkel Oil Partnership, Harrington & Bibler, Inc., Western Independent Oil Co., AZ Oil, Inc. and Balsam Producing Properties, LLC. We have contacted these owners and their consent to these locations is attached.

If you have any questions or need additional information please contact me at (303)-382-4448. Thank you for your assistance in this matter.

Sincerely,

Laurie Deseau

Division Order Analyst

Exception Locations

Federal 4-33-8-18; Lease UTU-74872

Federal ~~4~~ 33-8-18; Lease UTU-74872

3

Please be advised that Thomas Lambert does not have an objection to the proposed locations of the aforementioned wells.

By: Thomas Lambert

Date: 12/2/04

THOMAS LAMBERT  
Print Name and Title

**Exception Locations****Federal 4-33-8-18; Lease UTU-74872****Federal 3-33-8-18; Lease UTU-74872**

Please be advised that Larry R. Simpson does not have an objection to the proposed locations of the aforementioned wells.

By: 

Date: Jan 3, 2005

Larry R. Simpson  
Print Name and Title

## Exception Locations

Federal 4-33-8-18; Lease UTU-74872

Federal 5-33-8-18; Lease UTU-74872

3

Please be advised that Montana & Wyoming Oil Co. does not have an objection to the proposed locations of the aforementioned wells.

By: R.C. Balsam Jr.Date: 10-26-04

Robert C. Balsam Jr. - President  
Print Name and Title

Exception Locations

Federal 4-33-8-18; Lease UTU-74872

Federal ~~4~~-33-8-18; Lease UTU-74872

3

Please be advised that John R. Warne does not have an objection to the proposed locations of the  
aforementioned wells.

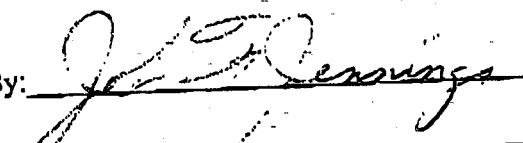
By: John R. Warne  
JOHN R. WARNE  
Print Name and Title

Date: 12/5/04

Exception Locations  
Federal 4-33-8-18; Lease UTU-74872  
Federal 3-33-8-18; Lease UTU-74872

Please be advised that John F. Jennings does not have an objection to the proposed locations of the aforementioned wells.

By:

  
\_\_\_\_\_  
Print Name and Title

Date: 12/27/04

**Exception Locations****Federal 4-33-8-18; Lease UTU-74872****Federal 5-33-8-18; Lease UTU-74872**

Please be advised that Great Northern Drilling Co. does not have an objection to the proposed locations of the aforementioned wells.

By:

*George Galuska*  
*George Galuska Agent*  
Print Name and Title

Date:

*10-25-04*

Exception Locations  
Federal 4-33-8-18; Lease UTU-74872  
Federal 5-33-8-18; Lease UTU-74872

RECEIVED  
NOV 09 2004  
INLAND RESOURCES

Please be advised that the Lambert Trust dtd 9/13/91 does not have an objection to the proposed locations of the aforementioned wells.

By: Mary Alden  
LAMBERT TRUST  
Print Name and Title

Date: 11-2-01

## Exception Locations

Federal 4-33-8-18; Lease UTU-74872

Federal 5-33-8-18; Lease UTU-74872

Please be advised that Carrkel Oil Partnership does not have an objection to the proposed locations of the aforementioned wells.

By:

Larry R Simpson  
LARRY R SIMPSON  
Print Name and Title  
MANAGER

Date: 10-21-04

## Exception Locations

Federal 4-33-8-18; Lease UTU-74872

Federal 5-33-8-18; Lease UTU-74872

Please be advised that Harrington & Bibler, Inc. does not have an objection to the proposed locations of the aforementioned wells.

By: Larry R. Simpson  
LARRY R. SIMPSON  
SECRETARY  
Print Name and Title

Date: 10-21-04

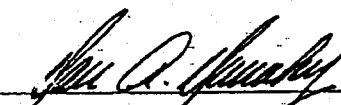

Exception Locations

Federal 4-33-8-18; Lease UTU-74872

Federal 5-33-8-18; Lease UTU-74872

Please be advised that Western Independent Oil Company does not have an objection to the proposed locations of the aforementioned wells.

By:

Print Name and Title

Date:

12/08/2004

**Exception Locations****Federal 4-33-8-18; Lease UTU-74872****Federal 3-33-8-18; Lease UTU-74872**

Please be advised that AZ Oil, Inc. does not have an objection to the proposed locations of the  
aforementioned wells.

By:

*Marlynn Jubb*  
*President, AZ Oil Inc.*  
Print Name and Title

Date:

*12/18/04*

## Exception Locations


Federal 4-33-8-18; Lease UTU-74872

Federal 8-33-8-18; Lease UTU-74872

3

Please be advised that Balsam Producing Properties, LLC does not have an objection to the proposed locations of the aforementioned wells.

By:



Date: 10-26-04

Robert C. Balsam Jr. - Manager  
Print Name and Title



## State of Utah

Department of  
Natural ResourcesROBERT L. MORGAN  
*Executive Director*Division of  
Oil, Gas & MiningMARY ANN WRIGHT  
*Acting Division Director*OLENE S. WALKER  
*Governor*GAYLE F. McKEACHNIE  
*Lieutenant Governor*

January 6, 2005

Newfield Production Company  
Rt. #3, Box 3630  
Myton, UT 84052Re: Federal 3-33-8-18 Well, 425' FNL, 1594' FWL, NE NW, Sec. 33, T. 8 South,  
R. 18 East, Uintah County, Utah

Gentlemen:

Pursuant to the provisions and requirements of Utah Code Ann. § 40-6-1 *et seq.*, Utah Administrative Code R649-3-1 *et seq.*, and the attached Conditions of Approval, approval to drill the referenced well is granted.

Appropriate information has been submitted to DOGM and administrative approval of the requested exception location is hereby granted.

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date. The API identification number assigned to this well is 43-047-35979.

Sincerely,

John R. Baza  
Associate Director

pab  
Enclosurescc: Uintah County Assessor  
Bureau of Land Management, Vernal District Office

**Operator:** Newfield Production Company  
**Well Name & Number** Federal 3-33-8-18  
**API Number:** 43-047-35979  
**Lease:** UTU-74872

**Location:** NE NW                      **Sec.** 33                      **T.** 8 South                      **R.** 18 East

### **Conditions of Approval**

**1. General**

Compliance with the requirements of Utah Admin. R. 649-1 *et seq.*, the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

**2. Notification Requirements**

Notify the Division within 24 hours of spudding the well.

- Contact Carol Daniels at (801) 538-5284.

Notify the Division prior to commencing operations to plug and abandon the well.

- Contact Dan Jarvis at (801) 538-5338

**3. Reporting Requirements**

All required reports, forms and submittals will be promptly filed with the Division, including but not limited to the Entity Action Form (Form 6), Report of Water Encountered During Drilling (Form 7), Weekly Progress Reports for drilling and completion operations, and Sundry Notices and Reports on Wells requesting approval of change of plans or other operational actions.

**4. State approval of this well does not supersede the required federal approval, which must be obtained prior to drilling.**

**5. This proposed well is located in an area for which drilling units (well spacing patterns) have not been established through an order of the Board of Oil, Gas and Mining (the "Board"). In order to avoid the possibility of waste or injury to correlative rights, the operator is requested, once the well has been drilled, completed, and has produced, to analyze geological and engineering data generated therefrom, as well as any similar data from surrounding areas if available. As soon as is practicable after completion of its analysis, and if the analysis suggests an area larger than the quarter-quarter section upon which the well is located is being drained, the operator is requested to seek an appropriate order from the Board establishing drilling and spacing units in conformance with such analysis by filing a Request for Agency Action with the Board.**

RECEIVED

OCT 01 2004

BLM VERNAL, UTAH

Form 3160-3  
(September 2001)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

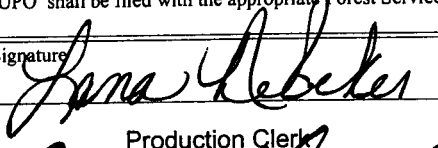
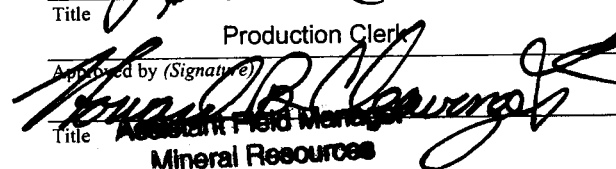
FORM APPROVED  
OMB No. 1004-0136  
Expires January 31, 2004

1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. UTU-74872
1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name N/A
2. Name of Operator Newfield Production Company		7. If Unit or CA Agreement, Name and No. N/A
3a. Address Route #3 Box 3630, Myton UT 84052		8. Lease Name and Well No. Federal 3-33-8-18
3b. Phone No. (include area code) (435) 646-3721		9. API Well No. 43-047-35979
4. Location of Well (Report location clearly and in accordance with any State requirements.) At surface NE/NW 272' FNL 1594' FWL At proposed prod. zone		10. Field and Pool, or Exploratory
14. Distance in miles and direction from nearest town or post office* Approximatley 22.3 miles south of Myton, Utah		11. Sec., T., R., M., or Blk. and Survey or Area NE/NW Sec. 33, T8S R18E
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) Approx. 425' f/lease, 4855' f/unit	16. No. of Acres in lease 677.36	12. County or Parish Uintah
17. Spacing Unit dedicated to this well 40 Acres	18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. Approx. 965'	13. State UT
19. Proposed Depth 6500'	20. BLM/BIA Bond No. on file UTU0056	
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 4966.8' GL	22. Approximate date work will start* 1st Quarter 2005	23. Estimated duration Approximately seven (7) days from spud to rig release.

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, shall be attached to this form:

- Well plat certified by a registered surveyor.
- A Drilling Plan.
- A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).
- Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
- Operator certification.
- Such other site specific information and/or plans as may be required by the authorized officer.

25. Signature 	Name (Printed/Typed) Lana Nebeker	Date 9-30-04
Title Production Clerk		
Approved by (Signature) 	Name (Printed/Typed) Kenneth B. Chavira	Date 12/14/2005
Title Assistant Field Manager Mineral Resources	Office	

Application approval does not warrant or certify the the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.  
Conditions of approval, if any, are attached.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

\*(Instructions on reverse)

RECEIVED

DEC 20 2005

DIV. OF OIL, GAS & MINING

NOTICE OF APPROVAL

CONDITIONS OF APPROVAL ATTACHED

U006M

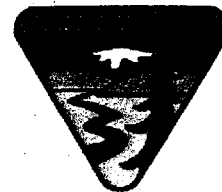
25/10/2005

11-105



UNITED STATES DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
VERNAL FIELD OFFICE

170 South 500 East VERNAL, UT 84078 (435) 781-4400



**CONDITIONS OF APPROVAL FOR APPLICATION FOR PERMIT TO  
DRILL**

Company: NEWFIELD PRODUCTION CO      Location: NENW, Sec.33, T8S, R18E  
Well No: Federal 3-33-8-18      Lease No: UTU-74872  
API No: 43-047-35979      Agreement: N/A

Petroleum Engineer:	Matt Baker	Office: 435-781-4490	Cell: 435-828-4470
Petroleum Engineer:	Michael Lee	Office: 435-781-4432	Cell: 435-828-7875
Supervisory Petroleum Technician:	Jamie Sparger	Office: 435-781-4502	Cell: 435-828-3913
Environmental Scientist:	Paul Buhler	Office: 435-781-4475	Cell: 435-828-4029
Environmental Scientist:	Karl Wright	Office: 435-781-4484	
Natural Resource Specialist:	Holly Villa	Office: 435-781-4404	
Natural Resource Specialist:	Melissa Hawk	Office: 435-781-4476	
Office Fax: (435) 781-4410	After hours message number: (435) 781-4513		

**A COPY OF THESE CONDITIONS SHALL BE FURNISHED TO YOUR  
FIELD REPRESENTATIVE TO INSURE COMPLIANCE**

All lease and/or unit operations are to be conducted in such a manner that full compliance is made with the applicable laws, regulations (43 CFR Part 3160), and this approved Application for Permit to Drill including Surface and Downhole Conditions of Approval. The operator is considered fully responsible for the actions of his subcontractors. A copy of the approved APD must be on location during construction, drilling, and completion operations.

**NOTIFICATION REQUIREMENTS**

- |   |   |  |
|---|---|--|
| Location Construction<br>(Melissa Hawk ES / NRS)        | - | Forty-Eight (48) hours prior to construction of location and access roads.   |
| Location Completion<br>(Melissa Hawk ES / NRS)          | - | Prior to moving on the drilling rig.   |
| Spud Notice<br>(Notify PE)                              | - | Twenty-Four (24) hours prior to spudding the well.   |
| Casing String & Cementing<br>(Notify Jamie Sparger)     | - | Twenty-Four (24) hours prior to running casing and cementing all casing strings.   |
| BOP & Related Equipment Tests<br>(Notify Jamie Sparger) | - | Twenty-Four (24) hours prior to initiating pressure tests.   |
| First Production Notice<br>(Notify PE)                  | - | Within Five (5) business days after new well begins or production resumes after well has been off production for more than ninety (90) days. |

***SURFACE USE PROGRAM  
CONDITIONS OF APPROVAL (COAs)***

-This well is being approved in accordance with Washington Instruction Memorandum 2005-247 and Section 390 (Category 3) of the Energy Policy Act which establishes statutory categorical exclusions (CX) under the National Environmental Policy Act (NEPA). Category 3 states that an oil or gas well can be drilled within a developed field for which an approved land use plan or any environmental document prepared pursuant to NEPA analyzed drilling as a reasonably foreseeable activity, so long as such plan or document was approved within five (5) years prior to the date of spudding the well. This well is covered under the *Final Environmental Impact Statement and Record of Decision Castle Peak and Eightmile Flat Oil and Gas Exploration Project Newfield Rocky Mountains Inc.*, signed November 21, 2005. If the well has not been spudded by November 21, 2010, a new environmental document will have to be prepared prior to the approval of the APD.

-Due to the presence of Sclerocactus habitat in this area, a survey was conducted by Amanda Christensen (Plant and Wildlife Specialist) to determine if Sclerocactus are present. Since no cactus plants were found, the proposed well is clear from a T&E plant stand point.

-The construction of the access road and location shall be monitored by a certified paleontologist and a report of the findings provided to the Vernal Field Office of the Bureau of Land Management.

-4 to 6 inches of topsoil shall be stripped from the location and placed where it can most easily be accessed for interim reclamation. Once the well has been converted to water injection, the fill slopes shall be recontoured and the topsoil shall be spread over the entire well location. The well location shall then be seeded with crested wheatgrass (Variety Hycrest) at a 12 lb/acre rate (pure live seed). After seeding has been completed, an access road loop to the well head can be established. The reserve pit will be allowed to stay open until interim reclamation is completed so the entire area can be seeded at the same time. The interim seeding of the well location and reserve pit shall be done by either drilling the seed or by broadcasting the seed and dragging it with a spike tooth harrow.

-The pipeline trench shall be dug in the borrow ditch of the road and the trench material side cast into the existing vegetation. Both the water line and the gas line shall be buried in the same trench. When backfilling the trenches, care should be taken to disturb as little of the vegetation as possible and thus allowing the existing plants to reestablish on their own, however, these disturbed areas should also be seeded with crested wheatgrass at the 12 lb/acre rate to ensure vegetation establishment and to keep invasive weeds to a minimum. All seeding of the pipelines shall be completed using a seed drill.

-The temporary gas lines used during the temporary production phase shall be laid on the surface, and then removed once the well is turned to water injection.

-No pipeline construction will be allowed outside of already disturbed areas when soils are muddy and rutting of soils becomes apparent from the use of vehicles. If rutting occurs, operations must cease until soils are dry or frozen.

## **DOWNHOLE CONDITIONS OF APPROVAL**

**All provisions outlined in Onshore Oil & Gas Order #2 Drilling Operations shall be strictly adhered to.** The following items are emphasized:

### **SITE SPECIFIC DOWNHOLE CONDITIONS OF APPROVAL**

1. Casing cementing operations for production casing shall return cement to surface.

### **DRILLING/COMPLETION/PRODUCING OPERATING STANDARDS**

1. There shall be no deviation from the proposed drilling, completion, and/or workover program as approved. Safe drilling and operating practices must be observed. All wells, whether drilling, producing, suspended, or abandoned, shall be identified in accordance with 43 CFR 3162.6. There shall be a sign or marker with the name of the operator, lease serial number, well number, and surveyed description of the well. Any changes in operation must have prior approval from the BLM, Vernal Field Office Petroleum Engineers.
2. The spud date and time shall be reported orally to Vernal Field Office within 24 hours of spudding.
3. **Notify Vernal Field Office Supervisory Petroleum Engineering Technician at least 24 hours in advance of casing cementing operations and BOPE & casing pressure tests.**
4. Blowout prevention equipment (BOPE) will remain in use until the well is completed or abandoned. Closing unit controls must remain unobstructed and readily accessible at all times. Choke manifolds must be located outside of the rig substructure.

All BOPE components will be inspected daily and those inspections shall be recorded in the daily drilling report. Components shall be operated and tested as required by Onshore Oil & Gas Order No. 2 to insure good mechanical working order. All BOPE pressure tests must be performed by a test pump with a chart recorder and **NOT** by the rig pumps. Test must be reported in the driller's log.

BOP drills must be initially conducted by each drilling crew within 24 hours of drilling out from under the surface casing and weekly thereafter as specified in Onshore Oil & Gas Order No. 2.

Casing pressure tests are required before drilling out from under all casing strings set and cemented in place.

No aggressive/fresh hard-banded drill pipe shall be used within casing.

5. All shows of fresh water and minerals will be reported and protected. A sample will be taken of any water flows and a water analysis furnished the BLM, Vernal Field Office. All oil and gas shows will be adequately tested for commercial possibilities, reported, and protected.

6. No location will be constructed or moved, no well will be plugged, and no drilling or workover equipment will be removed from a well to be placed in a suspended status without prior approval of the BLM, Vernal Field Office. If operations are to be suspended for more than 30 days, prior approval of the BLM, Vernal Field Office must be obtained and notification given before resumption of operations.
7. Chronologic drilling progress reports must be filed directly with the BLM, Vernal Field Office on a weekly basis in sundry, letter format or e-mail to the Petroleum Engineers until the well is completed.

Any change in the program must be approved by the BLM, Vernal Field Office. "Sundry Notices and Reports on Wells" (Form BLM 3160-5) must be filed for all changes of plans and other operations in accordance with 43 CFR 3162.3-2.

Emergency approval may be obtained orally, but such approval does not waive the written report requirement. Any additional construction, reconstruction, or alterations of facilities, including roads, gathering lines, batteries, etc., which will result in the disturbance of new ground, will require the filing of a suitable plan pursuant to Onshore Oil & Gas Order No. 1 of 43 CFR 3164.1 and prior approval by the BLM, Vernal Field Office.

In accordance with 43 CFR 3162.4-3, this well must be reported on the "Monthly Report of Operations" (Oil and Gas Operations Report ((OGOR)) starting with the month in which operations commence and continue each month until the well is physically plugged and abandoned. This report shall be filed in duplicate, directly with the Minerals Management Service, P.O. Box 17110, Denver, Colorado 80217-0110, or call 1-800-525-7922 (303) 231-3650 for reporting information.

8. Whether the well is completed as a dry hole or as a producer, "Well Completion and Recompletion Report and Log" (BLM Form 3160-4) will be submitted not later than 30 days after completion of the well or after completion of operations being performed, in accordance with 43 CFR 3162.4-1. Two copies of all logs run, core descriptions, and all other surveys or data obtained and compiled during the drilling, workover, and/or completion operations, will be filed on BLM Form 3160-4. Submit with the well completion report a geologic report including, at a minimum, formation tops, and a summary and conclusions. Also include deviation surveys, sample descriptions, strip logs, core data, drill stem test data, and results of production tests if performed. Samples (cuttings, fluid, and/or gas) will be submitted only when requested by the BLM, Vernal Field Office.

**Please submit an electronic copy of all logs run on this well in LAS format to [UT\\_VN\\_Welllogs@BLM.gov](mailto:UT_VN_Welllogs@BLM.gov). This submission will supersede the requirement for submittal of paper logs to the BLM. The cement bond log must be submitted in raster format (TIF, PDF other).**

9. All off-lease storage, off-lease measurement, or commingling on-lease or off-lease will have prior written approval from the BLM, Vernal Field Office.

All measurement points shall be identified as point of sales or allocation for royalty determination prior to the installation of facilities.

10. Oil and gas meters will be calibrated in place prior to any deliveries. The Field Office Petroleum Engineers will be provided with a date and time for the initial meter calibration and all future meter proving schedules. A copy of the meter calibration reports will be submitted to the BLM, Vernal Field Office. All measurement facilities will conform to the API standards for liquid hydrocarbons and the AGA standards for natural gas measurement.
11. A schematic facilities diagram as required by Onshore Oil & Gas Order No. 3 shall be submitted to the BLM, Vernal Field Office within 30 days of installation or first production, whichever occurs first. All site security regulations as specified in Onshore Oil & Gas Order No. 3 shall be adhered to. All product lines entering and leaving hydrocarbon storage tanks will be effectively sealed in accordance with Onshore Oil & Gas Order No. 3.
12. This APD is approved subject to the requirement that, should the well be successfully completed for production, the BLM, Vernal Field office must be notified when it is placed in a producing status. Such notification will be by written communication and must be received in this office by not later than the fifth business day following the date on which the well is placed on production. The notification shall provide, as a minimum, the following informational items:
  - a. Operator name, address, and telephone number.
  - b. Well name and number.
  - c. Well location ( $\frac{1}{4}$  Sec., Twn, Rng, and P.M.).
  - d. Date well was placed in a producing status (date of first production for which royalty will be paid).
  - e. The nature of the well's production, (i.e., crude oil, or crude oil and casing head gas, or natural gas and entrained liquid hydrocarbons).
  - f. The Federal or Indian lease prefix and number on which the well is located; otherwise the non-Federal or non-Indian land category, i.e., State or private.
  - g. Unit agreement and / or participating area name and number, if applicable.
  - h. Communitization agreement number, if applicable.
13. Any venting or flaring of gas will be done in accordance with Notice to Lessees (NTL) 4A and needs prior approval from Field Office Petroleum Engineers.

14. All undesirable events (fires, accidents, blowouts, spills, discharges) as specified in NTL 3A will be reported to the BLM, Vernal Field Office. Major events as defined in NTL3A, will be reported verbally within 24 hours, followed by a written report within 15 days. "Other than Major Events" will be reported in writing within 15 days. "Minor Events" will be reported on the Monthly Report of Operations and Production
15. Pursuant to Onshore Oil & Gas Order No. 7, this is authorization for pit disposal of water produced from this well for a period of 90 days from the date of initial production. A permanent disposal method must be approved by this office and in operation prior to the end of this 90-day period. In order to meet this deadline, an application for the proposed permanent disposal method shall be submitted along with any necessary water analyses, as soon as possible, but no later than 45 days after the date of first production. Any method of disposal which has not been approved prior to the end of the authorized 90-day period will be considered as an Incident of Noncompliance and will be grounds for issuing a shut-in order until an acceptable manner for disposing of said water is provided and approved by this office.
16. Unless the plugging is to take place immediately upon receipt of oral approval, the Field Office Petroleum Engineers must be notified at least 24 hours in advance of the plugging of the well, in order that a representative may witness plugging operations. If a well is suspended or abandoned, all pits must be fenced immediately until they are backfilled. The "Subsequent Report of Abandonment" (Form BLM 3160-5) must be submitted within 30 days after the actual plugging of the well bore, showing location of plugs, amount of cement in each, and amount of casing left in hole, and the current status of the surface restoration.

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
Budget Bureau No. 1004-0135  
Expires: March 31, 1993

**SUNDRY NOTICES AND REPORTS ON WELLS**

Do not use this form for proposals to drill or to deepen or reentry a different reservoir.  
Use "APPLICATION FOR PERMIT -" for such proposals

5. Lease Designation and Serial No.

**UTU-74872**

6. If Indian, Allottee or Tribe Name

**NA**

7. If Unit or CA, Agreement Designation

**SUNDANCE**

8. Well Name and No.

**FEDERAL 3-33-8-18**

9. API Well No.

**43-047-35979**

10. Field and Pool, or Exploratory Area

**8 MILE FLAT NORTH**

11. County or Parish, State

**UINTAH COUNTY, UT.**

**SUBMIT IN TRIPLICATE**

1. Type of Well

☒

Oil  
Well

☐

Gas  
Well

☐

Other

2. Name of Operator

**NEWFIELD PRODUCTION COMPANY**

3. Address and Telephone No.

**Rt. 3 Box 3630, Myton Utah, 84052 435-646-3721**

4. Location of Well (Footage, Sec., T., R., m., or Survey Description)

**425 FNL 1594 FWL NE/NW Section 33, T8S R18E**

12. CHECK APPROPRIATE BOX(S) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

**TYPE OF SUBMISSION**

☒

Notice of Intent

☐

Subsequent Report

☐

Final Abandonment Notice

**TYPE OF ACTION**

☐

Abandonment

☐

Recompletion

☐

Plugging Back

☐

Casing Repair

☐

Altering Casing

☒

Other

**Permit Extension**

☐

Change of Plans

☐

New Construction

☐

Non-Routine Fracturing

☐

Water Shut-Off

☐

Conversion to Injection

☐

Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)\*

Newfield Production Company requests to extend the Permit to Drill this well for one year. The original approval date was 1/6/05 (expiration 1/6/06).

Approved by the  
Utah Division of  
Oil, Gas and Mining

Date:

By:

SENT TO OPERATOR  
Date: 1-12-06  
Initials: C/H/D

RECEIVED  
JAN 03 2006

DIV. OF OIL, GAS & MINING

14. I hereby certify that the foregoing is true and correct

Signed

*Mandie Crozier*  
Mandie Crozier

Title

Regulatory Specialist

Date

12/30/2005

CC: UTAH DOGM

(This space for Federal or State office use)

Approved by

Title

Date

Conditions of approval, if any:

CC: Utah DOGM

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

RESET

**Application for Permit to Drill  
Request for Permit Extension  
Validation**

(this form should accompany the Sundry Notice requesting permit extension)

**API:** 43-047-35979  
**Well Name:** Federal 3-33-8-18  
**Location:** NE/NW Section 33, T8S R18E  
**Company Permit Issued to:** Newfield Production Company  
**Date Original Permit Issued:** 1/6/2005

The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision.

Following is a checklist of some items related to the application, which should be verified.

If located on private land, has the ownership changed, if so, has the surface agreement been updated? Yes ☐ No ☒ NA

Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location? Yes ☐ No ☒

Has there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well? Yes ☐ No ☒

Have there been any changes to the access route including ownership, or right-of-way, which could affect the proposed location? Yes ☐ No ☒

Has the approved source of water for drilling changed? Yes ☐ No ☒

Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation? Yes ☐ No ☒

Is bonding still in place, which covers this proposed well? Yes ☒ No ☐

Mandi Crozier  
Signature

12/30/2005  
Date

Title: Regulatory Specialist

Representing: Newfield Production Company

**RECEIVED**  
**JAN 03 2006**  
DIV. OF OIL, GAS & MINING

## DIVISION OF OIL, GAS AND MINING

### SPUDDING INFORMATION

Name of Company: NEWFIELD PRODUCTION COMPANY

Well Name: FEDERAL 3-33-8-18

Api No: 43-047-35979 Lease Type: FEDERAL

Section 33 Township 08S Range 18E County UINTAH

Drilling Contractor NDSI RIG # NS#1

### SPUDDED:

Date 02/02/06

Time 9:00 AM

How DRY

**Drilling will Commence:** \_\_\_\_\_

Reported by TROY

Telephone # 1-435-823-1613

Date 02/03/2006 Signed CHD

STATE OF UTAH  
DIVISION OF OIL, GAS AND MINING  
ENTITY ACTION FORM - FORM 6

OPERATOR: NEWFIELD PRODUCTION COMPANY  
ADDRESS: RT. 3 BOX 3630  
MYTON, UT 84082

OPERATOR ACCT. NO. N2895

ACTION CODE	CURRENT ENTITY NO.	NEW ENTITY NO.	API NUMBER	WELL NAME	WELL LOCATION					SPUD DATE	EFFECTIVE DATE
					QQ	SC	TP	RG	COUNTY		
B	99999	14844	43-047-36024	SUNDANCE FEDERAL 2-33-8-18	NW/NE	33	8S	18E	UINTAH	02/06/06	2/9/06
WELL 1 COMMENTS: <i>GRRV</i> - J											
B	99999	14844	43-047-36979	SUNDANCE FEDERAL 3-33-8-18	NW/NW	33	8S	18E	UINTAH	02/03/06	2/9/06
WELL 2 COMMENTS: <i>GRRV</i> - J											
B	99999	14844	43-047-36977	SUNDANCE FEDERAL 4-33-8-18	NW/NW	33	8S	18E	UINTAH	02/08/06	2/9/06
WELL 3 COMMENTS: <i>GRRV</i> - J											
A	99999	15175	43-047-36231	FEDERAL 15-30-8-18	SE/SW	30	8S	18E	UINTAH	02/07/06	2/9/06
WELL 4 COMMENTS: <i>GRRV</i> - J											
	99999										
WELL 5 COMMENTS:											
	99999										
WELL 6 COMMENTS:											

ACTION CODES (See instructions on back of form)

- A - Establish new entity for new well (all gas well only)
- B - Add new well to existing entity (gas or oil well)
- C - Re-assign well from one existing entity to another existing entity
- D - Re-assign well from one existing entity to a new entity
- E - Other (explain in comments section)

NOTE: Use COMMENTS section to explain why each Action Code was selected.

*Lana L. Baker*  
Signature  
Production Clerk  
Date  
Klan Kallio  
January 20, 2006

DIV. C. OIL, GAS & MINING

FEB 09 2006

02/09/2006 09:04 4356463031

INLAND

PAGE 02

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
OMB No. 1004-0135  
Expires January 31, 2004

**SUNDRY NOTICES AND REPORTS ON WELLS**  
Do not use this form for proposals to drill or to re-enter an  
abandoned well. Use Form 3160-3 (APD) for such proposals.

**SUBMIT IN TRIPLICATE - Other Instructions on reverse side**

5. Lease Serial No.

UTU74872

6. If Indian, Allottee or Tribe Name.

7. If Unit or C.A. Agreement, Name and/or No.

SUNDANCE UNIT

8. Well Name and No.

FEDERAL 3-33-8-18

9. API Well No.

4304735979

10. Field and Pool, or Exploratory Area  
Monument Butte

11. County or Parish, State

Uintah, UT

1. Type of Well  
☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator  
NEWFIELD PRODUCTION COMPANY

3a. Address Route 3 Box 3630  
Myton, UT 84052

3b. Phone No. (include are code)  
435.646.3721

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)  
272 FNL 1594 FWL  
NE/NW Section 33 T8S R18E

**12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, OR OTHER DATA**

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input type="checkbox"/> Other _____
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug & Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injector	<input type="checkbox"/> Plug Back	<input checked="" type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

Formation water is produced to a steel storage tank. If the production water meets quality guidelines, it is transported to the Ashley, Monument Butte, Jonah, and Beluga water injection facilities by company or contract trucks. Subsequently, the produced water is injected into approved Class II wells to enhance Newfield's secondary recovery project.

Water not meeting quality criteria, is disposed at Newfield's Pariette #4 disposal well (Sec. 7, T9S R19E) or at State of Utah approved surface disposal facilities.

**Accepted by the  
Utah Division of  
Oil, Gas and Mining  
FOR RECORD ONLY**

I hereby certify that the foregoing is true and correct

Name (Printed/ Typed)  
Mandie Crozier

Title

Regulatory Specialist

Signature

Date

03/27/2006

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved by

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Title

Date

Office

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious and fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on reverse)

**MAR 29 2006**

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
OMB No. 1004-0135  
Expires January 31, 2004

**SUNDRY NOTICES AND REPORTS ON WELLS**  
Do not use this form for proposals to drill or to re-enter an  
abandoned well. Use Form 3160-3 (APD) for such proposals.

**SUBMIT IN TRIPLICATE - Other Instructions on reverse side**

1. Type of Well  
☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator  
NEWFIELD PRODUCTION COMPANY

3a. Address Route 3 Box 3630  
Myton, UT 84052

3b. Phone No. (include are code)  
435.646.3721

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)  
272 FNL 1594 FWL  
NE/NW Section 33 T8S R18E

5. Lease Serial No.

UTU74872

6. If Indian, Allottee or Tribe Name.

7. If Unit or CA/Agreement, Name and/or No.  
SUNDANCE UNIT

8. Well Name and No.

FEDERAL 3-33-8-18

9. API Well No.

4304735979

10. Field and Pool, or Exploratory Area  
Monument Butte

11. County or Parish, State

Uintah, UT

**12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, OR OTHER DATA**

TYPE OF SUBMISSION	TYPE OF ACTION			
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production(Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other _____
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug & Abandon	<input type="checkbox"/> Temporarily Abandon	Spud Notice
	<input type="checkbox"/> Convert to Injector	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplate horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

On 2/3/2006 MIRU NDSI NS # 1. Spud well @ 9:00 AM. Drill 310' of 12 1/4" hole with air mist. TIH W/ 7 Jt's 8 5/8" J-55 24 # csgn. Set @ 312.48' KB On 2/5/2006 cement with 160 sks of class "G" w/ 2% CaCL2 + 1/4# sk Cello- Flake Mixed @ 15.8 ppg > 1.17 cf/ sk yeild. Return 5 bbls cement to pit. WOC.

I hereby certify that the foregoing is true and correct

Name (Printed/ Typed)  
Floyd Mitchell

Signature

*Floyd Mitchell*

Title

Drilling Supervisor

Date

02/08/2006

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved by

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Title

Date

Office

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(Instructions on reverse)

**RECEIVED**

**FEB 16 2006**

DIV. OF OIL, GAS & MINING

# NEWFIELD PRODUCTION COMPANY - CASING & CEMENT REPORT

8 5/8 CASING SET AT 312.48

LAST CASING 8 5/8" set @ 312.48  
 DATUM 12' KB  
 DATUM TO CUT OFF CASING \_\_\_\_\_  
 DATUM TO BRADENHEAD FLANGE \_\_\_\_\_  
 TD DRILLER 310' LOGGER \_\_\_\_\_  
 HOLE SIZE 12 1/4

OPERATOR Newfield Production Company  
 WELL Federal 3-33-8-18  
 FIELD/PROSPECT Monument Butte  
 CONTRACTOR & RIG # NDSI NS # 1

LOG OF CASING STRING:								
PIECES	OD	ITEM - MAKE - DESCRIPTION	WT / FT	GRD	THREAD	CONDT	LENGTH	
		Shoe Joint 43.12'						
		WHI - 92 csg head			8rd	A	0.95	
7	8 5/8"	Maverick ST&C csg	24#	J-55	8rd	A	300.63	
		<b>GUIDE</b> shoe			8rd	A	0.9	
CASING INVENTORY BAL.			FEET	JTS	TOTAL LENGTH OF STRING			302.48
TOTAL LENGTH OF STRING			302.48	7	LESS CUT OFF PIECE			2
LESS NON CSG. ITEMS			1.85		PLUS DATUM TO T/CUT OFF CSG			12
PLUS FULL JTS. LEFT OUT			0		CASING SET DEPTH			<b>312.48</b>
TOTAL			300.63	7	} COMPARE			
TOTAL CSG. DEL. (W/O THRDS)			300.63	7				
TIMING			1ST STAGE					
BEGIN RUN CSG. Spud			2/3/2006	9:00 AM	GOOD CIRC THRU JOB			Yes
CSG. IN HOLE			2/4/2006	3:00 PM	Bbls CMT CIRC TO SURFACE			5
BEGIN CIRC			2/5/2006	4:20 PM	RECIPROCATED PIPE FOR			N/A
BEGIN PUMP CMT			2/5/2006	4:43 PM				
BEGIN DSPL. CMT			2/5/2006	4:53 PM	BUMPED PLUG TO			500 PSI
PLUG DOWN			2/5/2006	5:03 PM				
CEMENT USED		CEMENT COMPANY- <b>B. J.</b>						
STAGE	# SX	CEMENT TYPE & ADDITIVES						
1	160	Class "G" w/ 2% CaCL2 + 1/4#/sk Cello-Flake mixed @ 15.8 ppg 1.17 cf/sk yield						
CENTRALIZER & SCRATCHER PLACEMENT		SHOW MAKE & SPACING						
Centralizers - Middle first, top second & third for 3								

COMPANY REPRESENTATIVE Troy Zufelt DATE 2/5/2006

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
OMB No. 1004-0135  
Expires January 31, 2004

**SUNDRY NOTICES AND REPORTS ON WELLS**  
Do not use this form for proposals to drill or to re-enter an  
abandoned well. Use Form 3160-3 (APD) for such proposals.

**SUBMIT IN TRIPLICATE - Other Instructions on reverse side**

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator

NEWFIELD PRODUCTION COMPANY

3a. Address Route 3 Box 3630

Myton, UT 84052

3b. Phone No. (include area code)

435.646.3721

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

272 FNL 1594 FWL

NE/NW Section 33 T8S R18E

5. Lease Serial No.

UTU74872

6. If Indian, Allottee or Tribe Name.

7. If Unit or CA/Agreement, Name and/or No.

SUNDANCE UNIT

8. Well Name and No.

FEDERAL 3-33-8-18

9. API Well No.

4304735979

10. Field and Pool, or Exploratory Area  
Monument Butte

11. County or Parish, State

Uintah, UT

**12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, OR OTHER DATA**

TYPE OF SUBMISSION	TYPE OF ACTION			
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production(Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other _____
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug & Abandon	<input type="checkbox"/> Temporarily Abandon	Weekly Status Report _____
	<input type="checkbox"/> Convert to Injector	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	_____

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

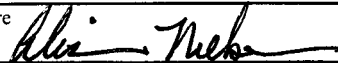
On 2/21/06 MIRU Union Rig # 14. Set all equipment. Pressure test Kelly, TIW, Choke manifold, & Bop's to 2,000 psi. Test 8.625 csgn to 1,500 psi. Vernal BLM field, & Roosevelt DOGM office was notified of test. PU BHA and tag cement @ 258'. Drill out cement & shoe. Drill a 7.875 hole with fresh water to a depth of 6270'. Lay down drill string & BHA. Open hole log w/ Dig/SP/GR log's TD to surface. PU & TIH with Guide shoe, shoe jt, float collar, 147 jt's of 5.5 J-55, 15.5# csgn. Set @ 6257' / KB. Cement with 375 sks cement mixed @ 11.0 ppg & 3.43 yld. Then 475 sks cement mixed @ 14.4 ppg & 1.24 yld. With 32 bbls cement returned to pit. Nipple down Bop's. Drop slips @94,000 #'s tension. Release rig 10:00 PM 2/27/06

I hereby certify that the foregoing is true and correct

Name (Printed/ Typed)

Alvin Nielsen

Signature



Title

Drilling Foreman

Date

02/28/2006

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved by \_\_\_\_\_

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Title

Date

Office

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious and fraudulent statements or representations as to any matter within its jurisdiction

(Instructions on reverse)

**RECEIVED**

**MAR 03 2006**

DIV. OF OIL, GAS & MINING

# NEWFIELD PRODUCTION COMPANY - CASING & CEMENT REPORT

5 1/2" CASING SET AT 6257.14

Flt cllr @ 6215.34

LAST CASING 8 5/8" SET / 312' \_\_\_\_\_

OPERATOR Newfield Production Company

DATUM 12' KB

WELL Federal 3-33-8-18

DATUM TO CUT OFF CASING 12'

FIELD/PROSPECT Monument Butte

DATUM TO BRADENHEAD FLANGE \_\_\_\_\_

CONTRACTOR & RIG # Union #14

TD DRILLER 6270 LOGGI 6263

HOLE SIZE 7 7/8"

LOG OF CASING STRING:							
PIECES	OD	ITEM - MAKE - DESCRIPTION	WT / FT	GRD	THREAD	CONDT	LENGTH
		Landing Jt					14
		<b>Short jt</b> 4439' (5.88')					
<b>147</b>	<b>5 1/2"</b>	ETC LT & C casing	<b>15.5#</b>	<b>J-55</b>	<b>8rd</b>	<b>A</b>	6201.34
		Float collar					0.6
<b>1</b>	<b>5 1/2"</b>	ETC LT&C csg	<b>15.5#</b>	<b>J-55</b>	<b>8rd</b>	<b>A</b>	42.55
		<b>GUIDE</b> shoe			<b>8rd</b>	<b>A</b>	0.65
CASING INVENTORY BAL.		FEET	JTS	TOTAL LENGTH OF STRING			6259.14
TOTAL LENGTH OF STRING		6243.89	148	LESS CUT OFF PIECE			14
LESS NON CSG. ITEMS		15.25		PLUS DATUM TO T/CUT OFF CSG			12
PLUS FULL JTS. LEFT OUT		127.48	3	CASING SET DEPTH			<b>6257.14</b>
TOTAL		<b>6371.37</b>	151	} COMPARE			
TOTAL CSG. DEL. (W/O THRDS)		6371.37	151				
TIMING		1ST STAGE	2nd STAGE				
BEGIN RUN CSG.		2/27/2006	7:00 AM	GOOD CIRC THRU JOB <u>YES</u>			
CSG. IN HOLE		2/27/2006	1:30 PM	Bbls CMT CIRC TO SURFACE <u>32</u>			
BEGIN CIRC		2/27/2006	1:50 PM	RECIPROCATED PIPE FOR <u>THRUSTROKE NA</u>			
BEGIN PUMP CMT		2/27/2006	3:36 PM	DID BACK PRES. VALVE HOLD ? <u>YES</u>			
BEGIN DSPL. CMT		2/27/2006	4:38 PM	BUMPED PLUG TO <u>2310</u> PSI			
PLUG DOWN		<b>2/27/2006</b>	<b>5:04 PM</b>				
CEMENT USED		CEMENT COMPANY- <b>B. J.</b>					
STAGE	# SX	CEMENT TYPE & ADDITIVES					
<b>1</b>	<b>375</b>	Premlite II w/ 10% gel + 3 % KCL, 3#'s /sk CSE + 2# sk/kolseal + 1/4#'s/sk Cello Flake					
		mixed @ 11.0 ppg W / 3.43 cf/sk yield					
<b>2</b>	<b>475</b>	50/50 poz W/ 2% Gel + 3% KCL, .5%EC1, 1/4# sk C.F. 2% gel. 3% SM mixed @ 14.4 ppg W/ 1.24 YLD					
CENTRALIZER & SCRATCHER PLACEMENT			SHOW MAKE & SPACING				
Centralizers - Middle first, top second & third. Then every third collar for a total of 20.							

COMPANY REPRESENTATIVE Alvin Nielsen

DATE 2/28/2006

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
OMB No. 1004-0135  
Expires January 31, 2004

**SUNDRY NOTICES AND REPORTS ON WELLS**  
Do not use this form for proposals to drill or to re-enter an  
abandoned well. Use Form 3160-3 (APD) for such proposals.

**SUBMIT IN TRIPLICATE - Other Instructions on reverse side**

1. Type of Well  
☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator  
NEWFIELD PRODUCTION COMPANY

3a. Address Route 3 Box 3630  
Myton, UT 84052

3b. Phone No. (include area code)  
435.646.3721

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)  
272 FNL 1594 FWL  
NE/NW Section 33 T8S R18E

5. Lease Serial No.

UTU74872

6. If Indian, Allottee or Tribe Name.

7. If Unit or CA/Agreement, Name and/or No.

SUNDANCE UNIT

8. Well Name and No.

FEDERAL 3-33-8-18

9. API Well No.

4304735979

10. Field and Pool, or Exploratory Area  
Monument Butte

11. County or Parish, State

Uintah, UT

**12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, OR OTHER DATA**

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug & Abandon	<input type="checkbox"/> Temporarily Abandon	Variance
	<input type="checkbox"/> Convert to Injector	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomple horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recomple in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

Newfield Production Company is requesting a variance from Onshore Order 43 CFR Part 3160 Section 4 requiring production tanks to be equipped with Enardo or equivalent vent line valves. Newfield operates wells that produce from the Green River formation, which are relatively low gas producers (20 mcfpd). The majority of the wells are equipped with a three phase separator to maximize gas separation and sales.

Newfield is requesting a variance for safety reasons. Crude oil production tanks equipped with back pressure devices will emit a surge of gas when the thief hatches are open. While gauging tanks, lease operators will be subject to breathing toxic gases as well as risk a fire hazard, under optimum conditions

**Accepted by the  
Utah Division of  
Oil, Gas and Mining**

Date: 3/30/06

By: [Signature]

Federal Approval Of This  
Action Is Necessary

I hereby certify that the foregoing is true and correct

Name (Printed/Typed)  
Mandie Crozier

Signature

Title

Regulatory Specialist

Date

03/27/2006

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved by

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Date

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(Instructions on reverse)

**MAR 29 2006**

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
OMB No. 1004-0135  
Expires January 31, 2004

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272 FNL 1594 FWL

NE/NW Section 33 T8S R18E

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SUNDANCE UNIT

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FEDERAL 3-33-8-18

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4304735979

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Uintah, UT

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<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production(Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other _____
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug & Abandon	<input type="checkbox"/> Temporarily Abandon	Weekly Status Report _____
	<input type="checkbox"/> Convert to Injector	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

Status report for time period 03/14/06 - 03/24/06

Subject well had completion procedures initiated in the Green River formation on 03-14-06 without the use of a service rig over the well. A cement bond log was run and a total of four Green River intervals were perforated and hydraulically fracture treated with 20/40 mesh sand. Perforated intervals are as follows: Stage #1 (5878'-5896'); Stage #2 (5270'-5284'); Stage #3(4547'-4570'); Stage #4(4481'-4486'),(4460'-4465'). All perforations, were 4 JSPF. Composite flow-through frac plugs were used between stages. Fracs were flowed back through chokes. A service rig was moved over the well on 03-22-2006. Bridge plugs were drilled out and well was cleaned to 6213'. Zones were swab tested for sand cleanup. A new 1 1/2" bore rod pump was run in well on sucker rods. Well was placed on production via rod pump on 03-24-2006.

I hereby certify that the foregoing is true and correct

Name (Printed/ Typed)  
Lana Nebeker

Signature

Title

Production Clerk

Date

04/10/2006

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved by

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Title

Date

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(Instructions on reverse)

**RECEIVED**

**APR 12 2006**

DIV. OF OIL, GAS & MINING

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

WELL COMPLETION OR RECOMPLETION REPORT AND LOG\*

1a. TYPE OF WORK

OIL WELL ☒

GAS WELL ☐

DRY ☐

Other \_\_\_\_\_

1b. TYPE OF WELL

NEW WELL ☒

WORK OVER ☐

DEEPEN ☐

PLUG BACK ☐

DIFF RESVR. ☐

Other \_\_\_\_\_

2. NAME OF OPERATOR

Newfield Exploration Company

3. ADDRESS AND TELEPHONE NO.

1401 17th St. Suite 1000 Denver, CO 80202

4. LOCATION OF WELL (Report locations clearly and in accordance with any State requirements.\*)

At Surface 425' FNL & 1594' FWL (NE/NW) Sec. 33, T8S, R18E

At top prod. Interval reported below

At total depth

14. API NO.

43-047-35979

DATE ISSUED

1/6/05

9. WELL NO.

43-047-35979

10. FIELD AND POOL OR WILDCAT

Eight Mile Flat

11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA

Sec. 33, T8S, R18E

12. COUNTY OR PARISH

Utah

13. STATE

UT

15. DATE SPUNDED

2/3/06

16. DATE T.D. REACHED

2/26/06

17. DATE COMPL. (Ready to prod.)

3/24/06

18. ELEVATIONS (DF. RKB. RT. GR. ETC.)\*

4967' GL

19. ELEV. CASINGHEAD

4979' KB

20. TOTAL DEPTH, MD & TVD

6270'

21. PLUG BACK T.D., MD & TVD

6213'

22. IF MULTIPLE COMPL. HOW MANY\*

23. INTERVALS DRILLED BY

----->

ROTARY TOOLS

X

CABLE TOOLS

24. PRODUCING INTERVAL(S). OF THIS COMPLETION--TOP, BOTTOM, NAME (MD AND TVD)\*

Green River, 4460'-5896'

25. WAS DIRECTIONAL SURVEY MADE

No

26. TYPE ELECTRIC AND OTHER LOGS RUN

Dual Induction Guard, SP, Compensated Density, Compensated Neutron, GR, Caliper, Cement Bond Log

27. WAS WELL CORED

No

23. CASING RECORD (Report all strings set in well)

CASING SIZE/GRADE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	TOP OF CEMENT, CEMENTING RECORD	AMOUNT PULLED
8-5/8" - J-55	24#	312'	12-1/4"	To surface with 160 sx Class "G" cmt	
5-1/2" - J-55	15.5#	6257'	7-7/8"	375 sx Premlite II and 475 sx 50/50 Poz	

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
					2-7/8"	EOT @ 5974'	TA @ 5846'

31. PERFORATION RECORD (Interval, size and number)

INTERVAL	SIZE	SPF/NUMBER	DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
(CP2) 5878'-5896'	.46"	4/72	5878'-5896'	Frac w/ 65,747# 20/40 sand in 533 bbls fluid
(B2) 5270'-5284'	.43"	4/56	5270'-5284'	Frac w/ 63,283# 20/40 sand in 492 bbls fluid
(GB4) 4547'-4570'	.43"	4/92	4547'-4570'	Frac w/ 99,846# 20/40 sand in 700 bbls fluid
(GB2) 4460'-4465', 4481'-4486'	.43"	4/40	4460'-4486'	Frac w/ 26,177# 20/40 sand in 324 bbls fluid

33.\* PRODUCTION

DATE FIRST PRODUCTION 3/24/06		PRODUCTION METHOD (Flowing, gas lift, pumping--size and type of pump) 2-1/2" x 1-1/2" x 14' RHAC SM Plunger Pump					WELL STATUS (Producing or shut-in) PRODUCING	
DATE OF TEST 30 day ave	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD ----->	OIL--BBL. 67	GAS--MCF. 10	WATER--BBL. 77	GAS-OIL RATIO 149	
FLOW, TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE ----->	OIL--BBL.	GAS--MCF.	WATER--BBL.	OIL GRAVITY-API (CORR.)		

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.)

Sold & Used for Fuel

TEST WITNESSED BY

35. LIST OF ATTACHMENTS

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

Regulatory Specialist

RECEIVED  
MAY 01 2006

SUMMARY OF POROUS ZONES: (Show all important zones of porosity and contents thereof; cored intervals, and all drill-stem, tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures, and recoveries);				38. GEOLOGIC MARKERS		
FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.	NAME	TOP	
					MEAS. DEPTH	TRUE VERT. DEPTH
			Well Name Federal 3-33-8-18	Garden Gulch Mkr		
				Garden Gulch 1		
				Garden Gulch 2	4308'	
				Point 3 Mkr	4652'	
				X Mkr	4823'	
				Y-Mkr	4860'	
				Douglas Creek Mkr	4996'	
				BiCarbonate Mkr	5198'	
				B Limestone Mkr		
				Castle Peak	5779'	
				Basal Carbonate	6172'	
				Total Depth (LOGGERS)	6263'	



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 8  
1595 WYNKOOP STREET  
DENVER, CO 80202-1129  
<http://www.epa.gov/region8>

NOV 20 2008

Ref: 8P-W-GW

**CERTIFIED MAIL**  
**RETURN RECEIPT REQUESTED**

Eric Sundberg  
Newfield Production Company  
1001 Seventeenth Street, Suite 2000  
Denver, CO 80202

RECEIVED

DEC 02 2008

DIV. OF OIL, GAS & MINING

**Accepted by the  
Utah Division of  
Oil, Gas and Mining  
FOR RECORD ONLY**

8S 18E 33  
Re: Final Permit w/ AOR Corrective Action  
EPA UIC Permit UT21101-07423  
Well: Federal 3-33-8-18  
Uintah County, Utah  
API No.: 43-047-35979

Dear Mr. Sundberg:

Enclosed is your copy of the FINAL Underground Injection Control (UIC) Permit for the proposed Federal 3-33-8-18 injection well. A Statement of Basis that discusses the conditions and requirements of this EPA UIC Permit, is also included.

The Public Comment period for this Permit ended on OCT 15 2008. No comments on the Draft Permit were received during the Public Notice period; therefore the Effective Date for this EPA UIC Permit is the date of issuance. All conditions set forth herein refer to Title 40 Parts 124, 144, 146, and 147 of the Code of Federal Regulations (CFR) and are regulations that are in effect as of the Effective Date of this Permit.

Please note that under the terms and conditions of this Final Permit you are authorized only to construct the proposed injection well. Prior to commencing injection, you first must fulfill all "Prior to Commencing Injection" requirements of the Final Permit, Part II Section C.1, and obtain written Authorization to Inject from the EPA. It is your responsibility to be familiar with and to comply with all provisions of your Final Permit. The EPA forms referenced in the permit are available at <http://www.epa.gov/safewater/uic/reportingforms.html>. Guidance documents for Cement Bond Logging, Radioactive Tracer testing, Step Rate testing, Mechanical Integrity demonstration, Procedure in the Event of a Mechanical Integrity Loss, and other UIC guidances, are available at [http://www.epa.gov/region8/water/uic/deep\\_injection.html](http://www.epa.gov/region8/water/uic/deep_injection.html). Upon request, hard copies of the EPA forms and guidances can be provided.

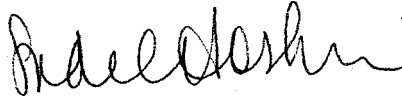


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This EPA UIC Permit is issued for the operating life of the well unless terminated (Part III, Section B). The EPA may review this Permit at least every five (5) years to determine whether any action is warranted pursuant to 40 CFR § 144.36(a).

If you have any questions on the enclosed Final Permit or Statement of Basis, please call Emmett Schmitz of my staff at (303) 312-6174, or toll-free at (800) 227-8917, ext. 312-6174.

Sincerely,



Stephen S. Tuber  
Assistant Regional Administrator  
Office of Partnerships and Regulatory Assistance

enclosure: Final UIC Permit  
Statement of Basis

cc: Letter only:

Uintah & Ouray Business Committee, Ute Indian Tribe:  
Curtis Cesspooch, Chairman  
Irene Cuch, Vice-Chairwoman  
Frances Poowegup, Councilwoman  
Ronald Groves, Councilman  
Phillip Chimburas, Councilman  
Steven Cesspooch, Councilman

Daniel Picard, Superintendent  
Uintah & Ouray Indian Agency  
U.S. Bureau of Indian Affairs

cc: all enclosures:

Michael Guinn  
District Manager  
Newfield Production Company  
Myton, Utah



Larry Love  
Director  
Energy & Minerals Dept.  
Ute Indian Tribe

Elaine Willie  
Gap Coordinatorr  
Ute Indian Tribe

Michelle Sabori  
Acting Director  
Land Use Dept.  
Ute Indian Tribe

Gilbert Hunt  
Assistant Director  
State of Utah - Natural Resources

Fluid Minerals Engineering Dept.  
U.S. Bureau of Land Management  
Vernal, Utah



**UNDERGROUND INJECTION CONTROL PROGRAM  
PERMIT**

PREPARED: November 2008

**Permit No. UT21101-07423**

Class II Enhanced Oil Recovery Injection Well

**Federal 3-33-8-18  
Uintah County, UT**

Issued To

**Newfield Production Company**  
1001 Seventeenth Street, Suite 2000  
Denver, CO 80202

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## Part I. AUTHORIZATION TO CONSTRUCT AND OPERATE

Under the authority of the Safe Drinking Water Act and Underground Injection Control (UIC) Program regulations of the U. S. Environmental Protection Agency (EPA) codified at Title 40 of the Code of Federal Regulations (40 CFR) Parts 2, 124, 144, 146, and 147, and according to the terms of this Permit,

Newfield Production Company  
1001 Seventeenth Street, Suite 2000  
Denver, CO 80202

is authorized to construct and to operate the following Class II injection well or wells:

Federal 3-33-8-18  
424' FNL & 1594' FWL, NENW S33, T8S, R18E  
Uintah County, UT

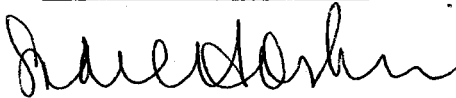
EPA regulates the injection of fluids into injection wells so that injection does not endanger underground sources of drinking water (USDWs). EPA UIC Permit conditions are based on authorities set forth at 40 CFR Parts 144 and 146, and address potential impacts to USDWs.

Under 40 CFR Part 144, Subpart D, certain conditions apply to all UIC Permits and may be incorporated either expressly or by reference. General permit conditions for which the content is mandatory and not subject to site-specific differences are not discussed in this document. Issuance of this Permit does not convey any property rights of any sort or any exclusive privilege, nor does it authorize injury to persons or property or invasion of other private rights, or any infringement of other Federal, State or local laws or regulations. (40 CFR §144.35) An EPA UIC Permit may be issued for the operating life of the injection well or project unless terminated for reasonable cause under 40 CFR §§144.39, 144.40 and 144.41, and may be reviewed at least once every five (5) years to determine if action is required under 40 CFR §144.36(a).

This Permit is issued for the life of the well(s) unless modified, revoked and reissued, or terminated under 40 CFR 144.39 or 144.40. This EPA Permit may be adopted, modified, revoked and reissued, or terminated if primary enforcement authority for a UIC Program is delegated to an Indian Tribe or State. Upon the effective date of delegation, reports, notifications, questions and other correspondence should be directed to the Indian Tribe or State Director.

Issue Date: NOV 20 2008

Effective Date NOV 20 2008



Stephen S. Tuber

for Assistant Regional Administrator\*

Office of Partnerships and Regulatory Assistance

\*NOTE: The person holding this title is referred to as the "Director" throughout this Permit.

## **PART II. SPECIFIC PERMIT CONDITIONS**

### **Section A. WELL CONSTRUCTION REQUIREMENTS**

These requirements represent the approved minimum construction standards for well casing and cement, injection tubing, and packer.

Details of the approved well construction plan are incorporated into this Permit as APPENDIX A. Changes to the approved plan that may occur during construction must be approved by the Director prior to being physically incorporated.

#### **1. Casing and Cement.**

The well or wells shall be cased and cemented to prevent the movement of fluids into or between underground sources of drinking water. The well casing and cement shall be designed for the life expectancy of the well and of the grade and size shown in APPENDIX A. Remedial cementing may be required if shown to be inadequate by cement bond log or other attempted demonstration of Part II (External) mechanical integrity.

#### **2. Injection Tubing and Packer.**

Injection tubing is required, and shall be run and set with a packer at or below the depth indicated in APPENDIX A. The packer setting depth may be changed provided it remains below the depth indicated in APPENDIX A and the Permittee provides notice and obtains the Director's approval for the change.

#### **3. Sampling and Monitoring Devices.**

The Permittee shall install and maintain in good operating condition:

- (a) a "tap" at a conveniently accessible location on the injection flow line between the pump house or storage tanks and the injection well, isolated by shut-off valves, for collection of representative samples of the injected fluid; and
- (b) one-half (1/2) inch female iron pipe fitting, isolated by shut-off valves and located at the wellhead at a conveniently accessible location, for the attachment of a pressure gauge capable of monitoring pressures ranging from normal operating pressures up to the Maximum Allowable Injection Pressure specified in APPENDIX C:
  - (i) on the injection tubing; and
  - (ii) on the tubing-casing annulus (TCA); and
- (c) a pressure actuated shut-off device attached to the injection flow line set to shut-off the injection pump when or before the Maximum Allowable Injection Pressure (MAIP) specified in APPENDIX C is reached at the wellhead; and
- (d) a non-resettable cumulative volume recorder attached to the injection line.

#### **4. Well Logging and Testing**

Well logging and testing requirements are found in APPENDIX B. The Permittee shall ensure the log and test requirements are performed within the time frames specified in APPENDIX B. Well logs and tests shall be performed according to current EPA-approved procedures. Well log and test results shall be submitted to the Director within sixty (60) days of completion of the logging or testing activity, and shall include a report describing the methods used during logging or testing and an interpretation of the test or log results.

#### **5. Postponement of Construction or Conversion**

The Permittee shall complete well construction within one year of the Effective Date of the Permit, or in the case of an Area Permit within one year of Authorization of the additional well. Authorization to construct and operate shall expire if the well has not been constructed within one year of the Effective Date of the Permit or Authorization and the Permit may be terminated under 40 CFR 144.40, unless the Permittee has notified the Director and requested an extension prior to expiration. Notification shall be in writing, and shall state the reasons for the delay and provide an estimated completion date. Once Authorization has expired under this part, the complete permit process including opportunity for public comment may be required before Authorization to construct and operate may be reissued.

#### **6. Workovers and Alterations**

Workovers and alterations shall meet all conditions of the Permit. Prior to beginning any addition or physical alteration to an injection well that may significantly affect the tubing, packer or casing, the Permittee shall give advance notice to the Director and obtain the Director's approval. The Permittee shall record all changes to well construction on a Well Rework Record (EPA Form 7520-12), and shall provide this and any other record of well workover, logging, or test data to EPA within sixty (60) days of completion of the activity.

A successful demonstration of Part I MI is required following the completion of any well workover or alteration which affects the casing, tubing, or packer. Injection operations shall not be resumed until the well has successfully demonstrated mechanical integrity and the Director has provided written approval to resume injection.

### **Section B. MECHANICAL INTEGRITY**

The Permittee is required to ensure each injection well maintains mechanical integrity at all times. The Director, by written notice, may require the Permittee to comply with a schedule describing when mechanical integrity demonstrations shall be made.

An injection well has mechanical integrity if:

- (a) There is no significant leak in the casing, tubing, or packer (Part I); and
- (b) There is no significant fluid movement into an underground source of drinking water through vertical channels adjacent to the injection well bore (Part II).

### **1. Demonstration of Mechanical Integrity (MI).**

The operator shall demonstrate MI prior to commencing injection and periodically thereafter. Well-specific conditions dictate the methods and the frequency for demonstrating MI and are discussed in the Statement of Basis. The logs and tests are designed to demonstrate both internal (Part I) and external (Part II) MI as described above. The conditions present at this well site warrant the methods and frequency required in Appendix B of this Permit.

In addition to these regularly scheduled demonstrations of MI, the operator shall demonstrate internal (Part I) MI after any workover which affects the tubing, packer or casing.

The Director may require additional or alternative tests if the results presented by the operator are not satisfactory to the Director to demonstrate there is no movement of fluid into or between USDWs resulting from injection activity. Results of MI tests shall be submitted to the Director as soon as possible but no later than sixty (60) days after the test is complete.

### **2. Mechanical Integrity Test Methods and Criteria**

EPA-approved methods shall be used to demonstrate mechanical integrity. Ground Water Section Guidance No. 34 "Cement Bond Logging Techniques and Interpretation", Ground Water Section Guidance No. 37, "Demonstrating Part II (External) Mechanical Integrity for a Class II injection well permit", and Ground Water Section Guidance No. 39, "Pressure Testing Injection Wells for Part I (Internal) Mechanical Integrity" are available from EPA and will be provided upon request.

The Director may stipulate specific test methods and criteria best suited for a specific well construction and injection operation.

### **3. Notification Prior to Testing.**

The Permittee shall notify the Director at least 30 days prior to any scheduled mechanical integrity test. The Director may allow a shorter notification period if it would be sufficient to enable EPA to witness the mechanical integrity test. Notification may be in the form of a yearly or quarterly schedule of planned mechanical integrity tests, or it may be on an individual basis.

### **4. Loss of Mechanical Integrity.**

If the well fails to demonstrate mechanical integrity during a test, or a loss of mechanical integrity becomes evident during operation (such as presence of pressure in the TCA, water flowing at the surface, etc.), the Permittee shall notify the Director within 24 hours (see Part III Section E Paragraph 11(e) of this Permit) and the well shall be shut-in within 48 hours unless the Director requires immediate shut-in.

Within five days, the Permittee shall submit a follow-up written report that documents test results, repairs undertaken or a proposed remedial action plan.

Injection operations shall not be resumed until after the well has successfully been repaired and demonstrated mechanical integrity, and the Director has provided approval to resume injection.

## **Section C. WELL OPERATION**

**INJECTION BETWEEN THE OUTERMOST CASING PROTECTING UNDERGROUND SOURCES OF DRINKING WATER AND THE WELL BORE IS PROHIBITED.**

Injection is approved under the following conditions:

### **1. Requirements Prior to Commencing Injection.**

Well injection, including for new wells authorized by an Area Permit under 40 CFR 144.33 (c), may commence only after all well construction and pre-injection requirements herein have been met and approved. The Permittee may not commence injection until construction is complete, and

Reference Appendix F-1(Corrective Action Requirements) and schematic diagram Appendix F-2, Federal No. 14-28-8-18, citing Permittee action relative to the absence of adequate 80% bond index cement bond within the Confining Zone

- (a) The Permittee has submitted to the Director a notice of completion of construction and a completed EPA Form 7520-10 or 7520-12; all applicable logging and testing requirements of this Permit (see APPENDIX B) have been fulfilled and the records submitted to the Director; mechanical integrity pursuant to 40 CFR 146.8 and Part II Section B of this Permit has been demonstrated; and
  - (i) The Director has inspected or otherwise reviewed the new injection well and finds it is in compliance with the conditions of the Permit; or
  - (ii) The Permittee has not received notice from the Director of his or her intent to inspect or otherwise review the new injection well within 13 days of the date of the notice in Paragraph 1a, in which case prior inspection or review is waived and the Permittee may commence injection.

### **2. Injection Interval.**

Injection is permitted only within the approved injection interval, listed in APPENDIX C. Additional individual injection perforations may be added provided that they remain within the approved injection interval and the Permittee provides notice to the Director in accordance with Part II, Section A, Paragraph 6.

### **3. Injection Pressure Limitation**

- (a) The permitted Maximum Allowable Injection Pressure (MAIP), measured at the wellhead, is found in APPENDIX C. Injection pressure shall not exceed the amount the Director determines is appropriate to ensure that injection does not initiate new fractures or propagate existing fractures in the confining zone adjacent to USDWs. In no case shall injection pressure cause the movement of injection or formation fluids into a USDW.

- (b) The Permittee may request a change of the MAIP, or the MAIP may be increased or decreased by the Director in order to ensure that the requirements in Paragraph (a) above are fulfilled. The Permittee may be required to conduct a step rate injection test or other suitable test to provide information for determining the fracture pressure of the injection zone. Change of the permitted MAIP by the Director shall be by modification of this Permit and APPENDIX C.

#### **4. Injection Volume Limitation.**

Injection volume is limited to the total volume specified in APPENDIX C.

#### **5. Injection Fluid Limitation.**

Injected fluids are limited to those identified in 40 CFR 144.6(b)(2) as fluids used for enhanced recovery of oil or natural gas, including those which are brought to the surface in connection with conventional oil or natural gas production that may be commingled with waste waters from gas plants which are an integral part of production operations unless those waters are classified as a hazardous waste at the time of injection, pursuant to 40 CFR 144.6(b). Non-exempt wastes, including unused fracturing fluids or acids, gas plant cooling tower cleaning wastes, service wastes and vacuum truck wastes, are NOT approved for injection. This well is NOT approved for commercial brine injection, industrial waste fluid disposal or injection of hazardous waste as defined by CFR 40 Part 261. The Permittee shall provide a listing of the sources of injected fluids in accordance with the reporting requirements in Part II Section D Paragraph 4 and APPENDIX D of this Permit.

#### **6. Tubing-Casing Annulus (TCA)**

The tubing-casing annulus (TCA) shall be filled with water treated with a corrosion inhibitor, or other fluid approved by the Director. The TCA valve shall remain closed during normal operating conditions and the TCA pressure shall be maintained at zero (0) psi.

If TCA pressure cannot be maintained at zero (0) psi, the Permittee shall follow the procedures in Ground Water Section Guidance No. 35 "Procedures to follow when excessive annular pressure is observed on a well."

### **Section D. MONITORING, RECORDKEEPING, AND REPORTING OF RESULTS**

#### **1. Monitoring Parameters, Frequency, Records and Reports.**

Monitoring parameters are specified in APPENDIX D. Pressure monitoring recordings shall be taken at the wellhead. The listed parameters are to be monitored, recorded and reported at the frequency indicated in APPENDIX D even during periods when the well is not operating.

Monitoring records must include:

- (a) the date, time, exact place and the results of the observation, sampling, measurement, or analysis, and;
- (b) the name of the individual(s) who performed the observation, sampling, measurement, or analysis, and;

- (c) the analytical techniques or methods used for analysis.

## **2. Monitoring Methods.**

- (a) Monitoring observations, measurements, samples, etc. taken for the purpose of complying with these requirements shall be representative of the activity or condition being monitored.
- (b) Methods used to monitor the nature of the injected fluids must comply with analytical methods cited and described in Table 1 of 40 CFR 136.3 or Appendix III of 40 CFR 261, or by other methods that have been approved in writing by the Director.
- (c) Injection pressure, annulus pressure, injection rate, and cumulative injected volumes shall be observed and recorded at the wellhead under normal operating conditions, and all parameters shall be observed simultaneously to provide a clear depiction of well operation.
- (d) Pressures are to be measured in pounds per square inch (psi).
- (e) Fluid volumes are to be measured in standard oil field barrels (bbl).
- (f) Fluid rates are to be measured in barrels per day (bbl/day).

## **3. Records Retention.**

- (a) Records of calibration and maintenance, and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit shall be retained for a period of AT LEAST THREE (3) YEARS from the date of the sample, measurement, report, or application. This period may be extended anytime prior to its expiration by request of the Director.
- (b) Records of the nature and composition of all injected fluids must be retained until three (3) years after the completion of any plugging and abandonment (P&A) procedures specified under 40 CFR 144.52(a)(6) or under Part 146 Subpart G, as appropriate. The Director may require the Permittee to deliver the records to the Director at the conclusion of the retention period. The Permittee shall continue to retain the records after the three (3) year retention period unless the Permittee delivers the records to the Director or obtains written approval from the Director to discard the records.

## **4. Annual Reports.**

Whether the well is operating or not, the Permittee shall submit an Annual Report to the Director that summarizes the results of the monitoring required by Part II Section D and APPENDIX D.

The first Annual Report shall cover the period from the effective date of the Permit through December 31 of that year. Subsequent Annual Reports shall cover the period from January 1 through December 31 of the reporting year. Annual Reports shall be submitted by February 15 of the year following data collection. EPA Form 7520-11 may be copied and shall be used to submit the Annual Report, however, the monitoring requirements specified in this Permit are mandatory even if EPA Form 7520-11 indicates otherwise.

## **Section E. PLUGGING AND ABANDONMENT**

### ***1. Notification of Well Abandonment, Conversion or Closure.***

The Permittee shall notify the Director in writing at least forty-five (45) days prior to: 1) plugging and abandoning an injection well, 2) converting to a non-injection well, and 3) in the case of an Area Permit, before closure of the project.

### ***2. Well Plugging Requirements***

Prior to abandonment, the injection well shall be plugged with cement in a manner which isolates the injection zone and prevents the movement of fluids into or between underground sources of drinking water, and in accordance with 40 CFR 146.10 and other applicable Federal, State or local law or regulations. Tubing, packer and other downhole apparatus shall be removed. Cement with additives such as accelerators and retarders that control or enhance cement properties may be used for plugs; however, volume-extending additives and gel cements are not approved for plug use. Plug placement shall be verified by tagging. Plugging gel of at least 9.6 lb/gal shall be placed between all plugs. A minimum 50 ft surface plug shall be set inside and outside of the surface casing to seal pathways for fluid migration into the subsurface. The Plugging Record must be certified as accurate and complete by the person responsible for the plugging operation. Prior to placement of the cement plug(s) the well shall be in a state of static equilibrium with the mud weight equalized top to bottom, either by circulating the mud in the well at least once or by a comparable method prescribed by the Director.

### ***3. Approved Plugging and Abandonment Plan.***

The approved plugging and abandonment plan is incorporated into this Permit as APPENDIX E. Changes to the approved plugging and abandonment plan must be approved by the Director prior to beginning plugging operations. The Director also may require revision of the approved plugging and abandonment plan at any time prior to plugging the well.

### ***4. Forty Five (45) Day Notice of Plugging and Abandonment.***

The Permittee shall notify the Director at least forty-five (45) days prior to plugging and abandoning a well and provide notice of any anticipated change to the approved plugging and abandonment plan.

### ***5. Plugging and Abandonment Report.***

Within sixty (60) days after plugging a well, the Permittee shall submit a report (EPA Form 7520-13) to the Director. The plugging report shall be certified as accurate by the person who performed the plugging operation. Such report shall consist of either:

- (a) A statement that the well was plugged in accordance with the approved plugging and abandonment plan; or

- (b) Where actual plugging differed from the approved plugging and abandonment plan, an updated version of the plan, on the form supplied by the Director, specifying the differences.

**6. Inactive Wells.**

After any period of two years during which there is no injection the Permittee shall plug and abandon the well in accordance with Part II Section E Paragraph 2 of this Permit unless the Permittee:

- (a) Provides written notice to the Director;
- (b) Describes the actions or procedures the Permittee will take to ensure that the well will not endanger USDWs during the period of inactivity. These actions and procedures shall include compliance with mechanical integrity demonstration, Financial Responsibility and all other permit requirements designed to protect USDWs; and
- (c) Receives written notice by the Director temporarily waiving plugging and abandonment requirements.

## **PART III. CONDITIONS APPLICABLE TO ALL PERMITS**

### **Section A. EFFECT OF PERMIT**

The Permittee is allowed to engage in underground injection in accordance with the conditions of this Permit. The Permittee shall not construct, operate, maintain, convert, plug, abandon, or conduct any other activity in a manner that allows the movement of fluid containing any contaminant into underground sources of drinking water, if the presence of that contaminant may cause a violation of any primary drinking water regulation under 40 CFR 142 or may otherwise adversely affect the health of persons. Any underground injection activity not authorized by this Permit or by rule is prohibited. Issuance of this Permit does not convey property rights of any sort or any exclusive privilege; nor does it authorize any injury to persons or property, any invasion of other private rights, or any infringement of any other Federal, State or local law or regulations. Compliance with the terms of this Permit does not constitute a defense to any enforcement action brought under the provisions of Section 1431 of the Safe Drinking Water Act (SDWA) or any other law governing protection of public health or the environment, for any imminent and substantial endangerment to human health or the environment, nor does it serve as a shield to the Permittee's independent obligation to comply with all UIC regulations. Nothing in this Permit relieves the Permittee of any duties under applicable regulations.

### **Section B. CHANGES TO PERMIT CONDITIONS**

#### ***1. Modification, Reissuance, or Termination.***

The Director may, for cause or upon a request from the Permittee, modify, revoke and reissue, or terminate this Permit in accordance with 40 CFR 124.5, 144.12, 144.39, and 144.40. Also, this Permit is subject to minor modification for causes as specified in 40 CFR 144.41. The filing of a request for modification, revocation and reissuance, termination, or the notification of planned changes or anticipated noncompliance on the part of the Permittee does not stay the applicability or enforceability of any condition of this Permit.

#### ***2. Conversions.***

The Director may, for cause or upon a written request from the Permittee, allow conversion of the well from a Class II injection well to a non-Class II well. Conversion may not proceed until the Permittee receives written approval from the Director. Conditions of such conversion may include but are not limited to, approval of the proposed well rework, follow up demonstration of mechanical integrity, well-specific monitoring and reporting following the conversion, and demonstration of practical use of the converted configuration.

#### ***3. Transfer of Permit.***

Under 40 CFR 144.38, this Permit is transferable provided the current Permittee notifies the Director at least thirty (30) days in advance of the proposed transfer date (EPA Form 7520-7) and provides a written agreement between the existing and new Permittees containing a specific date for transfer of Permit responsibility, coverage and liability between them. The notice shall adequately demonstrate that the financial responsibility requirements of 40 CFR 144.52(a)(7) will be met by the new Permittee. The Director may require modification or revocation and reissuance of the Permit to change the name of the Permittee and incorporate such other requirements as may be necessary under the Safe Drinking Water Act; in some cases, modification or revocation and reissuance is mandatory.

#### **4. Permittee Change of Address.**

Upon the Permittee's change of address, or whenever the operator changes the address where monitoring records are kept, the Permittee must provide written notice to the Director within 30 days.

#### **5. Construction Changes, Workovers, Logging and Testing Data**

The Permittee shall give advance notice to the Director, and shall obtain the Director's written approval prior to any physical alterations or additions to the permitted facility. Alterations or workovers shall meet all conditions as set forth in this permit. The Permittee shall record any changes to the well construction on a Well Rework Record (EPA Form 7520-12), and shall provide this and any other record of well workovers, logging, or test data to EPA within sixty (60) days of completion of the activity.

Following the completion of any well workovers or alterations which affect the casing, tubing, or packer, a successful demonstration of mechanical integrity (Part III, Section F of this Permit) shall be made, and written authorization from the Director received, prior to resuming injection activities.

### **Section C. SEVERABILITY**

The Provisions of this Permit are severable, and if any provision of this Permit or the application of any provision of this Permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this Permit shall not be affected thereby.

### **Section D. CONFIDENTIALITY**

In accordance with 40 CFR Part 2 and 40 CFR 144.5, information submitted to EPA pursuant to this Permit may be claimed as confidential by the submitter. Any such claim must be asserted at the time of submission by stamping the words "confidential business information" on each page containing such information. If no claim is made at the time of submission, EPA may make the information available to the public without further notice. If a claim is asserted, the validity of the claim will be assessed in accordance with the procedures in 40 CFR Part 2 (Public Information). Claims of confidentiality for the following information will be denied:

- The name and address of the Permittee, and
- information which deals with the existence, absence or level of contaminants in drinking water.

### **Section E. GENERAL PERMIT REQUIREMENTS**

#### **1. Duty to Comply.**

The Permittee must comply with all conditions of this Permit. Any noncompliance constitutes a violation of the Safe Drinking Water Act (SDWA) and is grounds for enforcement action; for Permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application; except that the Permittee need not comply with the provisions of this Permit to the extent and for the duration such noncompliance is authorized in an emergency permit under 40 CFR 144.34. All violations of the SDWA may subject the Permittee to penalties and/or criminal prosecution as specified in Section 1423 of the SDWA.

## **2. Duty to Reapply.**

If the Permittee wishes to continue an activity regulated by this Permit after the expiration date of this Permit, under 40 CFR 144.37 the Permittee must apply for a new permit prior to the expiration date.

## **3. Need to Halt or Reduce Activity Not a Defense.**

It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Permit.

## **4. Duty to Mitigate.**

The Permittee shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this Permit.

## **5. Proper Operation and Maintenance.**

The Permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Permittee to achieve compliance with the conditions of this Permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of this Permit.

## **6. Permit Actions.**

This Permit may be modified, revoked and reissued or terminated for cause. The filing of a request by the Permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

## **7. Property Rights.**

This Permit does not convey any property rights of any sort, or any exclusive privilege.

## **8. Duty to Provide Information.**

The Permittee shall furnish to the Director, within a time specified, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The Permittee shall also furnish to the Director, upon request, copies of records required to be kept by this Permit. The Permittee is required to submit any information required by this Permit or by the Director to the mailing address designated in writing by the Director.

## **9. Inspection and Entry.**

The Permittee shall allow the Director, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to:

- (a) Enter upon the Permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this Permit;

- (b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Permit;
- (c) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Permit; and,
- (d) Sample or monitor at reasonable times, for the purpose of assuring permit compliance or as otherwise authorized by the SDWA, any substances or parameters at any location.

#### **10. Signatory Requirements.**

All applications, reports or other information submitted to the Director shall be signed and certified according to 40 CFR 144.32. This section explains the requirements for persons duly authorized to sign documents, and provides wording for required certification.

#### **11. Reporting Requirements.**

- (a) Planned changes. The Permittee shall give notice to the Director as soon as possible of any planned changes, physical alterations or additions to the permitted facility, and prior to commencing such changes.
- (b) Anticipated noncompliance. The Permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.
- (c) Monitoring Reports. Monitoring results shall be reported at the intervals specified in this Permit.
- (d) Compliance schedules. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this Permit shall be submitted no later than 30 days following each schedule date.
- (e) Twenty-four hour reporting. The Permittee shall report to the Director any noncompliance which may endanger human health or the environment, including:
  - (i) Any monitoring or other information which indicates that any contaminant may cause endangerment to a USDW; or
  - (ii) Any noncompliance with a permit condition or malfunction of the injection system which may cause fluid migration into or between USDWs.

Information shall be provided, either directly or by leaving a message, within twenty-four (24) hours from the time the permittee becomes aware of the circumstances by telephoning (800) 227-8917 and requesting EPA Region VIII UIC Program Compliance and Technical Enforcement Director, or by contacting the EPA Region VIII Emergency Operations Center at (303) 293-1788.

In addition, a follow up written report shall be provided to the Director within five (5) days of the time the Permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause, the period of noncompliance including exact dates and times, and if the noncompliance has not been corrected the anticipated time it is expected to continue; and the steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.

- (f) Oil Spill and Chemical Release Reporting: The Permittee shall comply with all reporting requirements related to the occurrence of oil spills and chemical releases by contacting the National Response Center (NRC) at (800) 424-8802, (202) 267-2675, or through the NRC website <http://www.nrc.uscg.mil/index.htm>.
- (g) Other Noncompliance. The Permittee shall report all instances of noncompliance not reported under paragraphs Part III, Section E Paragraph 11(b) or Section E, Paragraph 11(e) at the time the monitoring reports are submitted. The reports shall contain the information listed in Paragraph 11(e) of this Section.
- (h) Other information. Where the Permittee becomes aware that it failed to submit any relevant facts in the permit application, or submitted incorrect information in a permit application or in any report to the Director, the Permittee shall promptly submit such facts or information to the Director.

## **Section F. FINANCIAL RESPONSIBILITY**

### ***1. Method of Providing Financial Responsibility.***

The Permittee shall maintain continuous compliance with the requirement to maintain financial responsibility and resources to close, plug, and abandon the underground injection well(s). No substitution of a demonstration of financial responsibility shall become effective until the Permittee receives written notification from the Director that the alternative demonstration of financial responsibility is acceptable. The Director may, on a periodic basis, require the holder of a permit to revise the estimate of the resources needed to plug and abandon the well to reflect changes in such costs and may require the Permittee to provide a revised demonstration of financial responsibility.

### ***2. Insolvency.***

In the event of:

- (a) the bankruptcy of the trustee or issuing institution of the financial mechanism; or
- (b) suspension or revocation of the authority of the trustee institution to act as trustee; or

- (c) the institution issuing the financial mechanism losing its authority to issue such an instrument

the Permittee must notify the Director in writing, within ten (10) business days, and the Permittee must establish other financial assurance or liability coverage acceptable to the Director within sixty (60) days after any event specified in (a), (b), or (c) above.

The Permittee must also notify the Director by certified mail of the commencement of voluntary or involuntary proceedings under Title 11 (Bankruptcy), U.S. Code naming the owner or operator as debtor, within ten (10) business days after the commencement of the proceeding. A guarantor, if named as debtor of a corporate guarantee, must make such a notification as required under the terms of the guarantee.

## APPENDIX A

### WELL CONSTRUCTION REQUIREMENTS

See diagram.

The Federal No. 3-33-8-18 was drilled to a total depth of 6270 feet (KB) feet in the Basal Carbonate Member of the Green River Formation.

Surface casing (8-5/8 inch) was set at a depth of 312 feet in a 12-1/4 inch hole using 160 sacks of Class "G" cement which was circulated to the surface.

Production casing (5-1/2 inch) was set at a depth of 6257 feet (KB) in a 7-7/8 inch hole with 375 sacks of Premium Lite II and 475 sacks of 50/50 poz mix. This well construction is considered adequate to protect USDWs.

The EPA calculates the top of cement as 760 feet from the surface. The Cement Bond Log (CBL) identifies top of cement at 190 feet. CBL analysis does identify adequate 80% bond index cement bond within the Confining Zone.

The schematic diagram shows enhanced recovery injection perforations in the Garden Gulch and Douglas Creek Members of the Green River Formation. Additional perforations may be added at a later time between the depths of 3993 feet and the top of the Wasatch Formation (Estimated to be 6297 feet) provided the operator first notifies the Director and later submits an updated well completion report (EPA Form 7520-12) and schematic diagram.

The packer will be set no higher than 100 feet above the top perforation.

# Federal 3-33-8-18

Spud Date: 02/03/06  
Put on Production: 03/24/06  
K.B. 4979, G.I. 4967

## Proposed Injection Wellbore Diagram

Initial Production: BOPD,  
MCFD, BWPD

### SURFACE CASING

CSG SIZE: 8-5/8" *Base USDOs* *<220'*  
GRADE: J-55  
WEIGHT: 24#  
LENGTH: 7 jls (300.63')  
DEPTH LANDED: 312.48' KB  
HOLE SIZE: 12-1/4" *Green River* *1683'*  
CEMENT DATA: 160 sss Class "C" emul. est 5 bbls emul to surf.

### PRODUCTION CASING

CSG SIZE: 5-1/2" *Tron2* *3188'*  
GRADE: J-55 *Mahogany Bench* *3224-3244'*  
WEIGHT: 15.5#  
LENGTH: 148 jls (6243.89')  
DEPTH LANDED: 6257.14' KB *80% Bond* *3593'-4234'*  
HOLE SIZE: 7-7/8"  
CEMENT DATA: 375 sss Prem. Lite H mixed & .475 sss 50/50 POZ.  
CEMENT TOP AT: 190'

### TUBING

SIZE/GRADE/WT.: 2-7/8" / J-55 / 6.5#  
NO. OF JOINTS: 187 jls (5835.75')  
TUBING ANCHOR: 5845.75' KB  
NO. OF JOINTS: 2 jls (62.48')  
SEATING NIPPLE: 2-7/8" (1.10')  
SN LANDED AT: 5911.03' KB  
NO. OF JOINTS: 2 jls (61.77')  
TOTAL STRING LENGTH: EOT @ 5974.35' KB

### FRAC JOB

03/20/06 5878-5896' *Frac CP2, sands as follows:*  
as 74# 20/40 sand in 533 bbls Lightning 17  
frac fluid. Treated @ avg press of 1298 psi  
w/avg rate of 25.5 BPM. ISIP 1550 psi. Calc  
flush: 5894 gal. Actual flush: 5880 gal.  
03/20/06 5270-5284' *Frac B2 sands as follows:*  
as 328# 20/40 sand in 492 bbls Lightning 17  
frac fluid. Treated @ avg press of 1783 psi  
w/avg rate of 25.5 BPM. ISIP 2320 psi. Calc  
flush: 5282 gal. Actual flush: 5250 gal.  
03/20/06 4547-4570' *Frac GB4 sands as follows:*  
as 99# 16# 20/40 sand 700 bbls Lightning 17  
frac fluid. Treated @ avg press of 1718 psi  
w/avg rate of 25.4 BPM. ISIP 2085 psi. Calc  
flush: 4568 gal. Actual flush: 4578 gal.  
03/20/06 4460-4486' *Frac GB2 sands as follows:*  
as 2617# 20/40 sand in 324 bbls Lightning 17  
frac fluid. Treated @ avg press of 2080 psi  
w/avg rate of 25.3 BPM. ISIP 2045 psi. Calc  
flush: 4484 gal. Actual flush: 4368 gal.

*3813-3993' Confining Zone*  
*3993' Garden Gulch*

*"A" Confining Shale 4114-4190'*  
*"B" Confining Shale 4222-4310'*

Packer @ 4425'

4460-4465'

4481-4486'

4547-4570'

*5046' Douglas Creek*

5270-5284'

### PERFORATION RECORD

03/1/06	5878-5896'	4 JSPP	72 holes
03/20/06	5270-5284'	4 JSPP	56 holes
03/20/06	4547-4570'	4 JSPP	92 holes
03/20/06	4481-4486'	4 JSPP	20 holes
03/20/06	4460-4465'	4 JSPP	20 holes

*5780-5795' Castle Peak*

5878-5896'

*6172' Basal Carbonate*

PBTD @ 6214'

SHOE @ 6257'

FD @ 6270'

*Est. Washatch 6297'*

NEWFIELD

Federal 3-33-8-18

425' ENL & 1594' FWI

NE/4 Section 33-T8S-R18E

Utah Co, Utah

API #133447 100% Leased to Newfield

## APPENDIX B

### LOGGING AND TESTING REQUIREMENTS

#### Logs.

Logs will be conducted according to current UIC guidance. It is the responsibility of the Permittee to obtain and use guidance prior to conducting any well logging required as a condition of this permit.

No corrective action is deemed necessary for the proposed Class II enhanced recovery well, Federal No. 3-33-8-18.

#### LOGGING REQUIREMENT ONLY FOR AREA-OF-REVIEW WELL FEDERAL NO. 14-28-8-18.

The Cement Bond Log (CBL) for Area-of-Review well Federal 14-28-8-18 does not demonstrate 80% bond index cement bond within the Green River Confining Zone or above the uppermost three (3) sets of basal Garden Gulch perforations. For this reason, the Federal No. 14-28-8-18 shall undergo Part II mechanical integrity testing, i.e., temperature logging on a routine basis prescribed by the EPA.

Prior to receiving EPA authorization to commence injection into Federal No. 3-33-8-18, the Permittee shall run a Temperature Log demonstrating current annulus conditions and submit same to the EPA with Permittee analysis. Additional Temperature Logs, on the Federal No. 14-28-8-18, shall be routinely conducted on five (5) year intervals for observation of potential injectate annulus flow. At no time shall annulus injectate flow rise above the top of the Garden Gulch Member.

The Permittee shall submit the Temperature Log and Permittee analysis to the EPA Class II Underground Injection Control section within fifteen (15) days of Permittee receiving the Temperature Log.

Permittee may request a Minor Permit Modification relative to revising the five (5) year scheduling of Temperature Log surveys after successfully demonstrating EPA-acceptable Part II Mechanical Integrity with the second Temperature Log.

### NO LOGGING REQUIREMENTS

#### Tests.

Tests will be conducted according to current UIC guidance. It is the responsibility of the Permittee to obtain and use guidance prior to conducting any well test required as a condition of this permit.

**WELL NAME:** Federal 3-33-8-18

<b>TYPE OF TEST</b>	<b>DATE DUE</b>
Step Rate Test	Within a 180-day period following commencement of injection
Standard Annulus Pressure	Prior to receiving authorization to inject and at least once within a five (5) year period following the last successful test.
Pore Pressure	Prior to receiving authorization to inject

## APPENDIX C

### OPERATING REQUIREMENTS

**MAXIMUM ALLOWABLE INJECTION PRESSURE:**

Maximum Allowable Injection Pressure (MAIP) as measured at the surface shall not exceed the pressure(s) listed below.

WELL NAME	MAXIMUM ALLOWED INJECTION PRESSURE (psi)
	ZONE 1 (Upper)
Federal 3-33-8-18	1,160

**INJECTION INTERVAL(S):**

Injection is permitted only within the approved injection interval listed below. Injection perforations may be altered provided they remain within the approved injection interval and the Permittee provides notice to the Director in accordance with Part II, Section A, Paragraph 6. Specific injection perforations can be found in Appendix A.

WELL NAME: Federal 3-33-8-18			
FORMATION NAME	APPROVED INJECTION INTERVAL (KB, ft)		FRACTURE GRADIENT (psi/ft)
	TOP	BOTTOM	
Green River: Garden Gulch and Douglas Creek Members	3,993.00 - 6,297.00		0.700

**ANNULUS PRESSURE:**

The annulus pressure shall be maintained at zero (0) psi as measured at the wellhead. If this pressure cannot be maintained, the Permittee shall follow the procedures listed under Part II, Section C. 6. of this permit.

**MAXIMUM INJECTION VOLUME:**

There is no limitation on the number of barrels per day (bbls/day) of water that shall be injected into this well, provided further that in no case shall injection pressure exceed that limit shown in Appendix C.

## APPENDIX D

### MONITORING AND REPORTING PARAMETERS

This is a listing of the parameters required to be observed, recorded, and reported. Refer to the permit Part II, Section D, for detailed requirements for observing, recording, and reporting these parameters.

OBSERVE MONTHLY AND RECORD AT LEAST ONCE EVERY THIRTY DAYS	
OBSERVE AND RECORD	Injection pressure (psig)
	Annulus pressure(s) (psig)
	Injection rate (bbl/day)
	Fluid volume injected since the well began injecting (bbls)

ANNUALLY	
ANALYZE	Injected fluid total dissolved solids (mg/l)
	Injected fluid specific gravity
	Injected fluid specific conductivity
	Injected fluid pH

ANNUALLY	
REPORT	Each month's maximum and averaged injection pressures (psig)
	Each month's maximum and minimum annulus pressure(s) (psig)
	Each month's injected volume (bbl)
	Fluid volume injected since the well began injecting (bbl)
	Written results of annual injected fluid analysis
	Sources of all fluids injected during the year

Records of all monitoring activities must be retained and made available for inspection at the following location:

**Newfield Production Company**  
**1001 Seventeenth Street - Suite 2000**  
**Denver, CO 80202**

## APPENDIX E

### PLUGGING AND ABANDONMENT REQUIREMENTS

See diagram.

The well shall be plugged in a manner that isolates the injection zone and prevents movement of fluid into or between USDWs and in accordance with other applicable Federal, State or local law or regulation. Tubing, packers, and any downhole apparatus shall be removed. Class A, C, G, and H cements, with additives such as accelerators and retarders that control or enhance cement properties, may be used for plugs. However, volume extending additives and gel cements are not approved for plug use. Plug placement shall be verified by tagging. Plugging gel of at least 9.2 lb/gal shall be placed between all plugs. Within sixty (60) days after plugging, the owner or operator shall submit Plugging Record (EPA Form 7520-13) to the Director. The Plugging Record must be certified as accurate and complete by the person responsible for the plugging operation. At a minimum, the following plugs are required:

**PLUG NO. 1: Seal Injection Zone:** Set a cast iron bridge plug (CIBP) no more than fifty (50) feet above the top injection perforation. Place at least twenty (20) feet of cement plug on top of the CIBP.

**PLUG NO. 2: Seal Mahogany Shale and Trona intervals:** Squeeze a cement plug on the backside of the 5-1/2 inch casing across the Trona Zone and the Mahogany Shale approximately 3135 feet to 3295 feet (unless pre-existing backside cement precludes cement-squeezing this interval) followed by a minimum 160-foot balanced cement plug inside the 5-1/2 inch casing across the Trona Zone and the Mahogany Shale, approximately 3135 feet to 3295 feet.

**PLUG NO. 3: Seal USDWs:** Squeeze a cement plug (1630 feet - 1730 feet) on the backside of the 5-1/2 inch casing across the base of the Uinta formation (unless pre-existing backside cement precludes cement-squeezing this interval), followed by a minimum 100-foot balanced cement plug inside the 5-1/2 inch casing across the base of the Uinta Formation, approximately 1630 feet to 1730 feet.

**PLUG NO.4: Seal Surface:** Set a Class "G" cement plug within the 5-1/2 inch casing to 362 feet and up the 5-1/2 inch by 8-5/8 inch casings annulus to the surface.

## Federal 3-33-8-18

Spud Date: 02/03/06  
 Put on Production: 03/24/06  
 KB: 4979' G.L.: 4967'

Proposed P&A  
Wellbore Diagram

## SURFACE CASING

CSG SIZE: 8-5/8"  
 GRADE: J-55  
 WEIGHT: 24#  
 LENGTH: 7 jts. (300.63')  
 DEPTH LANDED: 312.48' KB  
 HOLE SIZE: 12-1/4"  
 CEMENT DATA: 160 sxs Class "G" cement, est 5 bbls cement to surf.

## PRODUCTION CASING

CSG SIZE: 5-1/2"  
 GRADE: J-55  
 WEIGHT: 15.5#  
 LENGTH: 148 jts. (6243.89')  
 DEPTH LANDED: 6257.14' KB  
 HOLE SIZE: 7-7/8"  
 CEMENT DATA: 375 sxs Prem. Lite II mixed & 475 sxs 50/50 POZ.  
 CEMENT TOP AT: 190'

80% BOND 3593'-4234'

Cement Plug 1630-1730

Cement Plug 3135-3295

Pump 42 sxs Class G Cement down 5-1/2" casing to 362'

Casing Shoe @ 312'

362'

Green River 1683'

3188' - Trona

3224 - 3244' Mahogany Bench

3813 - 3993' Confining Zone

3993' Garden Gulch

20' 1 Class G Cement plug on top of CBP  
CBP 50' above top perf.

4460-4465'

4481-4486'

4547-4570'

5046' Douglas Creek

5270-5284'

5878-5896'

6172' Basal Carbonate

PRTD @ 6213'

SHOE @ 6257'

TD @ 6270'

Est. Interval 6297'

## NEWFIELD

Federal 3-33-8-18

425 ENI &amp; 1504 FWI

NECWA Section 33-FSS-R18E

Cantah &amp; Utah

L11111017 15070 15070 15070 15070

## **APPENDIX F**

### **CORRECTIVE ACTION REQUIREMENTS**

The Federal No. 14-28-8-18 will be monitored weekly at the surface for evidence of fluid movement out of the injection zone.

In addition, Newfield developed a corrective action monitoring program, effective July 10, 2008, entitled "Procedure related to proposed Class II Enhanced Oil Recovery Injection Wells determined by the EPA to have specific Area of Review (AOR) wells with inadequate cement across the Confining Zone".

If possible fluid movement out of the injection zone is identified, either through the weekly monitoring, through Newfield's July 10, 2008 procedure described above, or through any other means (for example, evidence of fluid flow or increased bradenhead annulus pressure readings, tubing-casing annulus pressure readings, or other evidence of a mechanical integrity failure), the Permittee will shut in the Federal No. 3-33-8-18 well immediately and notify the Director. No injection into the Federal No. 3-33-8-18 well will be permitted until the Permittee has notified the Director that the situation has been resolved, submitted Rework Records (EPA Form No. 7520-12) and a schematic diagram, and received authorization from the Director to re-commence injection.

## **PART VII. Plugging and Abandonment Requirements (40 CFR 146.10)**

The well shall be plugged in a manner that isolates the injection zone and prevents movement of fluid into or between USDWs and in accordance with other applicable Federal, State or local law or regulation. Tubing, packers, and any downhole apparatus shall be removed. Class A, C, G, and H cements, with additives such as accelerators and retarders that control or enhance cement properties, may be used for plugs. However, volume extending additives and gel cements are not approved for plug use. Plug placement shall be verified by tagging. Plugging gel of at least 9.2 lb/gal shall be placed between all plugs. Within sixty (60) days after plugging, the owner or operator shall submit Plugging Record (EPA Form 7520-13) to the Director. The Plugging Record must be certified as accurate and complete by the person responsible for the plugging operation. At a minimum, the following plugs are required:

**PLUG NO. 1: Seal Injection Zone:** Set a cast iron bridge plug (CIBP) no more than fifty (50) feet above the top injection perforation. Place at least twenty (20) feet of cement plug on top of the CIBP.

**PLUG NO. 2: Seal Mahogany Shale and Trona intervals:** Squeeze a cement plug on the backside of the 5-1/2 inch casing across the Trona Zone and the Mahogany Shale approximately 3135 feet to 3295 feet (unless pre-existing backside cement precludes cement-squeezing this interval) followed by a minimum 160-foot balanced cement plug inside the 5-1/2 inch casing across the Trona Zone and the Mahogany Shale, approximately 3135 feet to 3295 feet.

**PLUG NO. 3: Seal USDWs:** Squeeze a cement plug (1630 feet - 1730 feet) on the backside of the 5-1/2 inch casing across the base of the Uinta formation (unless pre-existing backside cement precludes cement-squeezing this interval), followed by a minimum 100-foot balanced cement plug inside the 5-1/2 inch casing across the base of the Uinta Formation, approximately 1630 feet to 1730 feet.

**PLUG NO. 4: Seal Surface:** Set a Class "G" cement plug within the 5-1/2 inch casing to 362 feet and up the 5-1/2 inch by 8-5/8 inch casings annulus to the surface.

### **Plugging and Abandonment Plan**

Prior to abandonment, the well shall be plugged in a manner that isolates the injection zone and prevents movement of fluid into or between USDWs, and in accordance with any applicable Federal, State or local law or regulation. Tubing, packer and other downhole apparatus shall be removed. Cement with additives such as accelerators and retarders that control or enhance cement properties may be used for plugs; however, volume-extending additives and gel cements are not approved for plug use. Plug placement shall be verified by tagging. Plugging gel of at least 9.6 lb/gal shall be placed between all plugs. A minimum 50 ft surface plug shall be set inside and outside of the surface casing to seal pathways for fluid migration into the subsurface. Within sixty (60) days after plugging the owner or operator shall submit Plugging Record (EPA Form 7520 13) to the Director. The Plugging Record must be certified as accurate and complete by the person responsible for the plugging operation. The plugging and abandonment plan is described in Appendix E of the Permit.

## **PART VIII. Financial Responsibility (40 CFR 144.52)**

### **Demonstration of Financial Responsibility**

The permittee is required to maintain financial responsibility and resources to close, plug, and abandon the underground injection operation in a manner prescribed by the Director. The permittee shall show evidence of such financial responsibility to the Director by the submission of a surety bond, or other adequate assurance such as financial statements or other materials acceptable to the Director. The Regional Administrator may, on a periodic basis, require the holder of a lifetime permit to submit a revised estimate of the resources needed to plug and abandon the well to reflect inflation of such costs, and a revised demonstration of financial responsibility if necessary. Initially, the operator has chosen to demonstrate financial responsibility with:

Financial Statement approved by the EPA February 22, 2008.

Financial Statement, received April 22, 2005

Evidence of continuing financial responsibility is required to be submitted to the Director annually.

# **STATEMENT OF BASIS**

**NEWFIELD PRODUCTION COMPANY**

**FEDERAL 3-33-8-18  
UINTAH COUNTY, UT**

**EPA PERMIT NO. UT21101-07423**

***CONTACT:*** Emmett Schmitz  
U. S. Environmental Protection Agency  
Ground Water Program, 8P-W-GW  
1595 Wynkoop Street  
Denver, Colorado 80202-1129  
Telephone: 1-800-227-8917 ext. 312-6174

This STATEMENT OF BASIS gives the derivation of site-specific UIC Permit conditions and reasons for them. Referenced sections and conditions correspond to sections and conditions in the Permit.

EPA UIC permits regulate the injection of fluids into underground injection wells so that the injection does not endanger underground sources of drinking water. EPA UIC permit conditions are based upon the authorities set forth in regulatory provisions at 40 CFR Parts 144 and 146, and address potential impacts to underground sources of drinking water. Under 40 CFR 144.35 Issuance of this permit does not convey any property rights of any sort or any exclusive privilege, nor authorize injury to persons or property or invasion of other private rights, or any infringement of other Federal, State or local laws or regulations. Under 40 CFR 144 Subpart D, certain conditions apply to all UIC Permits and may be incorporated either expressly or by reference. General Permit conditions for which the content is mandatory and not subject to site-specific differences (40 CFR Parts 144, 146 and 147) are not discussed in this document.

Upon the Effective Date when issued, the Permit authorizes the construction and operation of injection wells so that the injection does not endanger underground sources of drinking water, governed by the conditions specified in the Permit. The Permit is issued for the operating life of the injection well or project unless terminated for reasonable cause under 40 CFR 144.39, 144.40 and 144.41. The Permit is subject to EPA review at least once every five (5) years to determine if action is required under 40 CFR 144.36(a).

## PART I. General Information and Description of Facility

Newfield Production Company  
1001 Seventeenth Street, Suite 2000  
Denver, CO 80202

on

September 19, 2006

submitted an application for an Underground Injection Control (UIC) Program Permit or Permit Modification for the following injection well or wells:

Federal 3-33-8-18  
424' FNL & 1594' FWL, NENW S33, T8S, R18E  
Uintah County, UT

Regulations specific to Uintah-Ouray Indian Reservation injection wells are found at 40 CFR 147 Subpart TT.

The application, including the required information and data necessary to issue or modify a UIC Permit in accordance with 40 CFR Parts 144, 146 and 147, was reviewed and determined by EPA to be complete.

The Permit will expire upon delegation of primary enforcement responsibility (primacy) for applicable portions of the UIC Program to the Ute Indian Tribe or the State of Utah unless the delegated agency has the authority and chooses to adopt and enforce this Permit as a Tribal or State Permit.

TABLE 1.1 shows the status of the well or wells as "New", "Existing", or "Conversion" and for Existing shows the original date of injection operation. Well authorization "by rule" under 40 CFR Part 144 Subpart C expires automatically on the Effective Date of an issued UIC Permit.

The Federal No. 3-33-8-18 is currently an active Green River Formation, Garden Gulch and Douglas Creek Members, oil well. It is the initial intent of the applicant to use current production perforations for Class II enhanced recovery injection. The Federal No. 3-33-8-18 has total depth in the Basal Carbonate Member. The Confining Zone has adequate 80% bond index cement bond.

**TABLE 1.1**  
**WELL STATUS / DATE OF OPERATION**

NEW WELLS		
Well Name	Well Status	Date of Operation
Federal 3-33-8-18	New	N/A

## PART II. Permit Considerations (40 CFR 146.24)

### Hydrogeologic Setting

Water wells for domestic supply in this area, when present, generally are completed into the shallow alluvium, the Duchesne River Formation, or the underlying Uinta Formation, and the water generally contains approximately 500 to 1,500 mg/l and higher total dissolved solids.

The Uinta-Animas aquifer in the Uinta Basin is present in water-yielding beds of sandstone, conglomerate, and siltstone of the Duchesne River and Uinta Formations, the Renegade Tongue of the Wasatch Formation, and the Douglas Creek Member of the Green River Formation. The Renegade Tongue of the Wasatch Formation and the Douglas Creek Member of the Green River Formation contain an aquifer along the southern and eastern margins of the basin where the rocks primarily consist of fluvial, massive, irregularly bedded sandstone and siltstone. Water-yielding units in the Uinta-Animas aquifer in the Uinta Basin commonly are separated from each other and from the underlying Mesaverde aquifer by units of low permeability composed of claystone, shale, marlstone, or limestone. In the Uinta Basin, for example, the part of the aquifer in the Duchesne River and Uinta Formations ranges in thickness from 0 feet at the southern margin of the aquifer to as much as 9,000 feet in the north-central part of the aquifer. Ground-water recharge to the Uinta-Animas aquifer generally occurs in the areas of higher altitude along the margins of the basin. Ground water is discharged mainly to streams, springs, and by transpiration from vegetation growing along stream valleys. The rate of ground-water withdrawal is small, and natural discharge is approximately equal to recharge. Recharge occurs near the southern margin of the aquifer, and discharge occurs near the White and Green Rivers (from USGS publication HA 730-C). Water samples from Mesaverde sands in the nearby Natural Buttes Unit yielded highly saline water.

### Geologic Setting (TABLE 2.1)

The proposed enhanced oil recovery injection well is located in the Greater Monument Butte Field, T7-9S and R15-19E, which lies near the center of the broad, gently northward dipping south flank of the Uinta Basin. More than 450 million barrels of oil (63 MT) have been produced from sediments of the Uinta Basin. The Uinta Basin is a topographic and structural trough encompassing an area of more than 9300 square mi (14,900 km) in northeast Utah. The basin is sharply asymmetrical, with a steep north flank bounded by the east-west-trending Uinta Mountains, and a gently dipping south flank. The Uinta Basin was formed in Paleocene to Eocene time, creating a large area of internal drainage which was filled by the ancestral Lake Uinta. The lacustrine, or fresh water lake-formed, sediments deposited in and around Lake Uinta make up the Uintah and Green River Formations. The southern shore of Lake Uinta was very broad and flat, resulting in large cyclic shifts of the location of the shoreline during the many repeated transgressive and regressive cycles caused by the climatic and tectonic-induced rise and fall of water levels of the lake. Distributary-mouth bars, distributary channels, and near-shore bars are the primary oil producing sandstone reservoirs in the area. (Ref: "Reservoir Characterization of the Lower Green River Formation, Southwest Uinta Basin, Utah Biannual Technical Progress Report, 4/1/99-9/30/99", by C. D. Morgan, Program Manager, November 1999, Contract DE-AC26-98BC15103).

The Duchesne River Formation is absent in this area. Shale and siltstone of the Uintah Formation outcrop and compose the surface rock throughout the area. The lower 600 feet to 800 feet of the Uinta Formation, consisting generally of shale interbedded with occasionally water-bearing sandstone lenses between 5 feet to 20 feet thick, is underlain by the Green River Formation. The

Green River Formation is further subdivided into several Member and local marker units. The cyclic nature of Green River deposition in the southern shore area resulted in numerous stacked, intertonguing deltaic and near-shore sand and silt deposits. Red alluvial shale and siltstone deposits that intertongue with the Green River sediments are of the Colton and Wasatch Formations. Under the Wasatch Formation is the Mesaverde Formation, which consists primarily of continental-origin deposits of interbedded shale, sandstone, and coal.

The geologic dip is about 200 feet per mile, and there are no known surface faults in this area. Veins of gilsonite, a natural resinous hydrocarbon occasionally mined as a resource, occurs in the greater Uintah Basin though it is predominantly found on the eastern margin of the basin near the Colorado border. Vertical veins, generally between 2 ft to 6 ft wide but up to 28 ft wide, may extend many miles in length and occasionally extend as deep as 2000 ft. In this area within the Greater Monument Butte Field there is one known gilsonite vein. This vein is not considered to present a pathway for migration of fluid out of the injection zone because it terminates at depth of about 2000 ft, far above the protective confining layer and much deeper injection zone. Newfield and the owner of this former gilsonite mine have agreed to conditions for operation near this vein to ensure no potential for impact to this vein or to ground water from enhanced oil recovery operations.

**TABLE 2.1**  
**GEOLOGIC SETTING**  
**Federal 3-33-8-18**

Formation Name	Top (ft)	Base (ft)	TDS (mg/l)	Lithology
Uinta USDW	0	220	< 10,000	Sand and shale
Uinta	220	1,683		Intebbed sand, shale and carbonate with fluvial sand and shale
Green River	1,683	3,993		Interbedded lacustrine sand, shale and carbonate with fluvial sand and shale.
Green River: Trona	3,188	3,224		Evaporite
Green River: Mahogany Bench	3,224	3,244		Oil shale
Green River: Garden Gulch	3,993	5,046	> 10,000	Interbedded lacustrine sand, shale and carbonate with fluvial sand and shale
Green River: Douglas Creek	5,046	6,172	> 10,000	Interbedded lacustrine sand, shale and carbonate with fluvial sand and shale
Green River: Basal Carbonate	6,172	6,297		Carbonate

#### **Proposed Injection Zone(s) (TABLE 2.2)**

An injection zone is a geological formation, group of formations, or part of a formation that receives fluids through a well. The proposed injection zones are listed in TABLE 2.2.

Injection will occur into an injection zone that is separated from USDWs by a confining zone which is free of known open faults or fractures within the Area of Review.

The Environmental Protection Agency (EPA) approved interval for Class II enhanced recovery injection into the Federal No. 3-33-8-18 is located between the top of the Garden Gulch Member (3993 feet) and the top of the Wasatch Formation estimated to be 6297 feet.

**TABLE 2.2**  
**INJECTION ZONES**  
**Federal 3-33-8-18**

Formation Name	Top (ft)	Base (ft)	TDS (mg/l)	Fracture Gradient (psi/ft)	Porosity	Exempted?*
Green River: Garden Gulch and Douglas Creek Members	3,993	6,297	> 10,000	0.700		N/A

\* C - Currently Exempted  
E - Previously Exempted  
P - Proposed Exemption  
N/A - Not Applicable

**Confining Zone(s) (TABLE 2.3)**

A confining zone is a geological formation, part of a formation, or a group of formations that limits fluid movement above the injection zone. The confining zone or zones are listed in TABLE 2.3.

The 180-foot (3813 feet - 3993 feet) shale and argillaceous, impermeable siltstone Confining Zone directly overlies the top of the Garden Gulch Member. Within this Confining Zone are two (2) intervals of requisite 80% bond index cement bond.

**TABLE 2.3**  
**CONFINING ZONES**  
**Federal 3-33-8-18**

Formation Name	Formation Lithology	Top (ft)	Base (ft)
Green River	Shale with interbedded thin argillaceous impervious siltstone	3,813	3,993
Green River	Shale with thin argillaceous impervious siltstone	4,114	4,190
Green River	Shale with thin argillaceous impervious siltstone.	4,222	4,310

**Underground Sources of Drinking Water (USDWs) (TABLE 2.4)**

Aquifers or the portions thereof which contain less than 10,000 mg/l total dissolved solids (TDS) and are being or could in the future be used as a source of drinking water are considered to be USDWs. The USDWs in the area of this facility are identified in TABLE 2.4.

Throughout the Greater Monument Butte Field area undergoing enhanced oil recovery operations, water analyses of the Green River Formation generally exhibit total dissolved solids (TDS) content well in excess of 10,000 mg/l. However, some recent water analyses from the field showed lower TDS values closer to 10,000 mg/l. While rain and surface water recharge into Green River Formation outcrops further south along the Book Cliffs/Roan Cliffs in effect "freshens" the Green

River Formation water near those outcrops, in this area of the Monument Butte Field the observed occasional 'freshening' is ascribed to the effective dilution of the originally in-place high TDS water from injection of relatively fresh water for enhanced oil recovery operations. Water samples from deeper Mesaverde Formation sands in the nearby Natural Buttes Unit yield highly saline water.

The State of Utah "Water Wells and Springs" identifies no public water supply wells within the one-quarter (1/4) mile Area-of-Review (AOR) around the Federal No. 3-33-8-18.

Technical Publication No. 92: State of Utah, Department of Natural Resources, cites the base of Underground Sources of Drinking Water (USDW) in the Uinta Formation approximately 220 feet from the surface. Absent definitive information relative to the water quality of the Uinta Formation, from the depth of 220 feet to the base of the Uinta Formation (1683 feet), the EPA will require, during plugging and abandonment, a cement plug at the base of the Uinta Formation to protect contamination of possible Uinta USDWs.

**TABLE 2.4**  
**UNDERGROUND SOURCES OF DRINKING WATER (USDW)**  
**Federal 3-33-8-18**

Formation Name	Formation Lithology	Top (ft)	Base (ft)	TDS (mg/l)
Uinta	Sand and shale	0	220	< 10,000
Uinta	Interbedded lacustrine sand, shale and carbonate with fluvial sand and shale.	220	1,683	

### PART III. Well Construction (40 CFR 146.22)

The Federal No. 3-33-8-18 was drilled to a total depth of 6270 feet (KB) feet in the Basal Carbonate Member of the Green River Formation.

Surface casing (8-5/8 inch) was set at a depth of 312 feet in a 12-1/4 inch hole using 160 sacks of Class "G" cement which was circulated to the surface.

Production casing (5-1/2 inch) was set at a depth of 6257 feet (KB) in a 7-7/8 inch hole with 375 sacks of Premium Lite II and 475 sacks of 50/50 poz mix. This well construction is considered adequate to protect USDWs.

The EPA calculates the top of cement as 760 feet from the surface. The Cement Bond Log (CBL) identifies top of cement at 190 feet. CBL analysis does identify adequate 80% bond index cement bond within the Confining Zone.

The schematic diagram shows enhanced recovery injection perforations in the Garden Gulch and Douglas Creek Members of the Green River Formation. Additional perforations may be added at a later time between the depths of 3993 feet and the top of the Wasatch Formation (Estimated to be 6297 feet) provided the operator first notifies the Director and later submits an updated well completion report (EPA Form 7520-12) and schematic diagram.

The packer will be set no higher than 100 feet above the top perforation.

**TABLE 3.1**  
**WELL CONSTRUCTION REQUIREMENTS**  
**Federal 3-33-8-18**

Casing Type	Hole Size (in)	Casing Size (in)	Cased Interval (ft)	Cemented Interval (ft)
Production	7.88	5.50	0 - 6,257	190 - 6,257
surface	12.25	8.63	0 - 312	0 - 312

The approved well completion plan will be incorporated into the Permit as APPENDIX A and will be binding on the Permittee. Modification of the approved plan is allowed under 40 CFR 144.52(a)(1) provided written approval is obtained from the Director prior to actual modification.

#### **Casing and Cementing (TABLE 3.1)**

The well construction plan was evaluated and determined to be in conformance with standard practices and guidelines that ensure well injection does not result in the movement of fluids into USDWs. Well construction details for this "new" injection well is shown in TABLE 3.1.

Remedial cementing may be required if the casing cement is shown to be inadequate by cement bond log or other demonstration of Part II (External) mechanical integrity.

#### **Tubing and Packer**

Injection tubing is required to be installed from a packer up to the surface inside the well casing. The packer will be set above the uppermost perforation. The tubing and packer are designed to prevent injection fluid from coming into contact with the outermost casing.

#### **Tubing-Casing Annulus (TCA)**

The TCA allows the casing, tubing and packer to be pressure-tested periodically for mechanical integrity, and will allow for detection of leaks. The TCA will be filled with fresh water treated with a corrosion inhibitor or other fluid approved by the Director.

The tubing/casing annulus must be kept closed at all times so that it can be monitored under conditions of the Permit.

#### **Monitoring Devices**

The permittee will be required to install and maintain wellhead equipment that allows for monitoring pressures and providing access for sampling the injected fluid. Required equipment may include but is not limited to: 1) shut-off valves located at the wellhead on the injection tubing and on the TCA; 2) a flow meter that measures the cumulative volume of injected fluid; 3) fittings or pressure gauges attached to the injection tubing and the TCA for monitoring the injection and TCA pressure; and 4) a tap on the injection line, isolated by shut-off valves, for sampling the injected fluid.

All sampling and measurement taken for monitoring must be representative of the monitored activity.

## PART IV. Area of Review, Corrective Action Plan (40 CFR 144.55)

Reference Appendix F-1 (Corrective Action Requirements) and schematic diagram (Appendix F-2), Federal No. 14-28-8-18, citing Permittee action relative to the absence of adequate 80% bond index cement bond within the Confining Zone.

**TABLE 4.1**  
**AOR AND CORRECTIVE ACTION**

Well Name	Type	Status (Abandoned Y/N)	Total Depth (ft)	TOC Depth (ft)	CAP Required (Y/N)
Federal 14-28-8-18	Producer	No	6,200	2,120	Yes
Federal 14a-28-8-18	Producer	No	6,280	600	No
Federal 5-33-8-18	Producer	No	6,190	160	No
Sundance Fed'l 4-33-8-18	Producer	No	6,285	300	No

TABLE 4.1 lists the wells in the Area of Review ("AOR") and shows the well type, operating status, depth, top of casing cement ("TOC") and whether a Corrective Action Plan ("CAP") is required for the well.

### Area Of Review

Applicants for Class I, II (other than "existing" wells) or III injection well Permits are required to identify the location of all known wells within the injection well's Area of Review (AOR) which penetrate the injection zone, or in the case of Class II wells operating over the fracture pressure of the formation, all known wells within the area of review that penetrate formations which may be affected by increased pressure. Under 40 CFR 146.6 the AOR may be a fixed radius of not less than one quarter (1/4) mile or a calculated zone of endangering influence. For Area Permits, a fixed width of not less than one quarter (1/4) mile for the circumscribing area may be used.

### Corrective Action Plan

For wells in the AOR which are improperly sealed, completed, or abandoned, the applicant shall develop a Corrective Action Plan (CAP) consisting of the steps or modifications that are necessary to prevent movement of fluid into USDWs.

The CAP will be incorporated into the Permit as APPENDIX F and become binding on the permittee.

## PART V. Well Operation Requirements (40 CFR 146.23)

**TABLE 5.1**  
**INJECTION ZONE PRESSURES**  
**Federal 3-33-8-18**

Formation Name	Depth Used to Calculate MAIP (ft)	Fracture Gradient (psi/ft)	Initial MAIP (psi)
Green River: Garden Gulch and Douglas Creek Members	4,460	0.700	1,160

### Approved Injection Fluid

The approved injection fluid is limited to Class II injection well fluids pursuant to 40 CFR § 144.6(b). For disposal wells injecting water brought to the surface in connection with natural gas storage operations, or conventional oil or natural gas production, the fluid may be commingled and the well used to inject other Class II wastes such as drilling fluids and spent well completion, treatment and stimulation fluid. Injection of non-exempt wastes, including unused fracturing fluids or acids, gas plant cooling tower cleaning wastes, service wastes, and vacuum truck and drum rinsate from trucks and drums transporting or containing non-exempt waste, is prohibited.

The proposed injectate shall be a blend of culinary water from the Johnson Water District reservoir and/or water from the Green River pipeline, and produced Green River water from wells proximate to the Federal No. 3-33-8-18.

### Injection Pressure Limitation

Injection pressure, measured at the wellhead, shall not exceed a maximum calculated to assure that the pressure used during injection does not initiate new fractures or propagate existing fractures in the confining zones adjacent to the USDWs.

The applicant submitted injection fluid density and injection zone data which was used to calculate a formation fracture pressure and to determine the maximum allowable injection pressure (MAIP), as measured at the surface, for this Permit.

TABLE 5.1 lists the fracture gradient for the injection zone and the approved MAIP, determined according to the following formula:

$$FP = [fg - (0.433 * sg)] * d$$

- FP = formation fracture pressure (measured at surface)
- fg = fracture gradient (from submitted data or tests)
- sg = specific gravity (of injected fluid)
- d = depth to top of injection zone (or top perforation)

### Injection Volume Limitation

Cumulative injected fluid volume limits are set to assure that injected fluids remain within the boundary of the exempted area. Cumulative injected fluid volume is limited when injection occurs into an aquifer that has been exempted from protection as a USDW.

There will be no restrictions on the cumulative volume or daily volume of authorized Class II fluid

injected into the approved Green River Formation interval. The Permittee shall not exceed the maximum authorized injection pressure of 1160 psig.

### **Mechanical Integrity (40 CFR 146.8)**

An injection well has mechanical integrity if:

1. there is no significant leak in the casing, tubing, or packer (Part I); and
2. there is no significant fluid movement into a USDW through vertical channels adjacent to the injection well bore (Part II).

The Permit prohibits injection into a well which lacks mechanical integrity.

The Permit requires that the well demonstrate mechanical integrity prior to injection and periodically thereafter. A demonstration of mechanical integrity includes both internal (Part I) and external (Part II). The methods and frequency for demonstrating Part I and Part II mechanical integrity are dependent upon well-specific conditions as explained below.

Well construction and site-specific conditions dictate the following requirements for Mechanical Integrity (MI) demonstrations:

PART I MI: Internal MI will be demonstrated prior to beginning injection. Since this well is constructed with a standard casing, tubing, and packer configuration, a successful mechanical integrity test (MIT) is required to take place at least once every five (5) years. A demonstration of Part I MI is also required prior to resuming injection following any workover operation that affects the casing, tubing or packer. Part I MI may be demonstrated by a standard tubing-casing annulus pressure test using the maximum permitted injection pressure or 1000 psi, whichever is less, with a ten (10) percent or less pressure loss over thirty (30) minutes.

## **PART VI. Monitoring, Recordkeeping and Reporting Requirements**

### **Injection Well Monitoring Program**

At least once a year the permittee must analyze a sample of the injected fluid for total dissolved solids (TDS), specific conductivity, pH, and specific gravity. This analysis shall be reported to EPA annually as part of the Annual Report to the Director. Any time a new source of injected fluid is added, a fluid analysis shall be made of the new source.

Instantaneous injection pressure, injection flow rate, cumulative fluid volume and TCA pressures must be observed on a weekly basis. A recording, at least once every thirty (30) days, must be made of the injection pressure, annulus pressure, monthly injection flow rate and cumulative fluid volume. This information is required to be reported annually as part of the Annual Report to the Director.

## **PART VII. Plugging and Abandonment Requirements (40 CFR 146.10)**

The well shall be plugged in a manner that isolates the injection zone and prevents movement of fluid into or between USDWs and in accordance with other applicable Federal, State or local law or regulation. Tubing, packers, and any downhole apparatus shall be removed. Class A, C, G, and H cements, with additives such as accelerators and retarders that control or enhance cement properties, may be used for plugs. However, volume extending additives and gel cements are not approved for plug use. Plug placement shall be verified by tagging. Plugging gel of at least 9.2 lb/gal shall be placed between all plugs. Within sixty (60) days after plugging, the owner or operator shall submit Plugging Record (EPA Form 7520-13) to the Director. The Plugging Record must be certified as accurate and complete by the person responsible for the plugging operation. At a minimum, the following plugs are required:

**PLUG NO. 1: Seal Injection Zone:** Set a cast iron bridge plug (CIBP) no more than fifty (50) feet above the top injection perforation. Place at least twenty (20) feet of cement plug on top of the CIBP.

**PLUG NO. 2: Seal Mahogany Shale and Trona intervals:** Squeeze a cement plug on the backside of the 5-1/2 inch casing across the Trona Zone and the Mahogany Shale approximately 3135 feet to 3295 feet (unless pre-existing backside cement precludes cement-squeezing this interval) followed by a minimum 160-foot balanced cement plug inside the 5-1/2 inch casing across the Trona Zone and the Mahogany Shale, approximately 3135 feet to 3295 feet.

**PLUG NO. 3: Seal USDWs:** Squeeze a cement plug (1630 feet - 1730 feet) on the backside of the 5-1/2 inch casing across the base of the Uinta formation (unless pre-existing backside cement precludes cement-squeezing this interval), followed by a minimum 100-foot balanced cement plug inside the 5-1/2 inch casing across the base of the Uinta Formation, approximately 1630 feet to 1730 feet.

**PLUG NO.4: Seal Surface:** Set a Class "G" cement plug within the 5-1/2 inch casing to 362 feet and up the 5-1/2 inch by 8-5/8 inch casings annulus to the surface.

### **Plugging and Abandonment Plan**

Prior to abandonment, the well shall be plugged in a manner that isolates the injection zone and prevents movement of fluid into or between USDWs, and in accordance with any applicable Federal, State or local law or regulation. Tubing, packer and other downhole apparatus shall be removed. Cement with additives such as accelerators and retarders that control or enhance cement properties may be used for plugs; however, volume-extending additives and gel cements are not approved for plug use. Plug placement shall be verified by tagging. Plugging gel of at least 9.6 lb/gal shall be placed between all plugs. A minimum 50 ft surface plug shall be set inside and outside of the surface casing to seal pathways for fluid migration into the subsurface. Within sixty (60) days after plugging the owner or operator shall submit Plugging Record (EPA Form 7520 13) to the Director. The Plugging Record must be certified as accurate and complete by the person responsible for the plugging operation. The plugging and abandonment plan is described in Appendix E of the Permit.

## **PART VIII. Financial Responsibility (40 CFR 144.52)**

### **Demonstration of Financial Responsibility**

The permittee is required to maintain financial responsibility and resources to close, plug, and abandon the underground injection operation in a manner prescribed by the Director. The permittee shall show evidence of such financial responsibility to the Director by the submission of a surety bond, or other adequate assurance such as financial statements or other materials acceptable to the Director. The Regional Administrator may, on a periodic basis, require the holder of a lifetime permit to submit a revised estimate of the resources needed to plug and abandon the well to reflect inflation of such costs, and a revised demonstration of financial responsibility if necessary. Initially, the operator has chosen to demonstrate financial responsibility with:

Financial Statement approved by the EPA February 22, 2008.
--

Financial Statement, received April 22, 2005
--

Evidence of continuing financial responsibility is required to be submitted to the Director annually.

**STATE OF UTAH**  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

**SUNDRY NOTICES AND REPORTS ON WELLS**

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

1. TYPE OF WELL: OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER		5. LEASE DESIGNATION AND SERIAL NUMBER: USA UTU-74872
2. NAME OF OPERATOR: NEWFIELD PRODUCTION COMPANY		6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
3. ADDRESS OF OPERATOR: Route 3 Box 3630 CITY Myton STATE UT ZIP 84052		7. UNIT or CA AGREEMENT NAME: SUNDANCE UNIT
4. LOCATION OF WELL: FOOTAGES AT SURFACE: 272 FNL 1594 FWL		8. WELL NAME and NUMBER: FEDERAL 3-33-8-18
5. PHONE NUMBER: 435.646.3721		9. API NUMBER: 4304735979
6. COUNTY: UINTAH		10. FIELD AND POOL, OR WILDCAT: MONUMENT BUTTE
7. OTR/OTR. SECTION. TOWNSHIP. RANGE. MERIDIAN: NENW, 33, T8S, R18E		8. STATE: UT

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate)  Approximate date work will _____	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLAIR
<input checked="" type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only)  Date of Work Completion: 02/17/2009	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input checked="" type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/STOP)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> OTHER: -
	<input checked="" type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

On 2/13/09 Margo Smith with the EPA was contacted concerning the initial MIT on the above listed well. Permission was given at that time to perform the test on 2/18/09. On 2/18/09 the csg was pressured up to 1450 psig and charted for 30 minutes with no pressure loss. The well was not injecting during the test. The tbg pressure was 150 psig during the test. There was not an EPA representative available to witness the test.

EPA# UT21101-07423

API# 43-047-35979

**Accepted by the  
Utah Division of  
Oil, Gas and Mining  
FOR RECORD ONLY**

NAME (PLEASE PRINT) Callie Ross

TITLE Production Clerk

SIGNATURE

*Callie Ross*

DATE 02/25/2009

(This space for State use only)

**RECEIVED**  
**MAR 02 2009**  
DIV. OF OIL, GAS & MINING

# Mechanical Integrity Test

## Casing or Annulus Pressure Mechanical Integrity Test

U.S. Environmental Protection Agency  
Underground Injection Control Program  
999 18<sup>th</sup> Street, Suite 500 Denver, CO 80202-2466

EPA Witness: \_\_\_\_\_ Date: 02/18/09  
Test conducted by: Date Giles  
Others present: \_\_\_\_\_

Well Name: <u>Federal 3-33-8-18</u>	Type: ER SWD	Status: AC TA UC
Field: <u>Sundance Unit</u>		
Location: _____	Sec: <u>33</u> T <u>8</u> N <u>8</u> R <u>18</u> W	County: <u>Uintah</u> State: <u>UT</u>
Operator: <u>Newfield Production Co.</u>		
Last MIT: _____	Maximum Allowable Pressure: _____	PSIG

Is this a regularly scheduled test? ☐ Yes ☐ No  
Initial test for permit? ☒ Yes ☐ No  
Test after well rework? ☐ Yes ☐ No  
Well injecting during test? ☐ Yes ☒ No If Yes, rate: \_\_\_\_\_ bpd

Pre-test casing/tubing annulus pressure: 0 psig

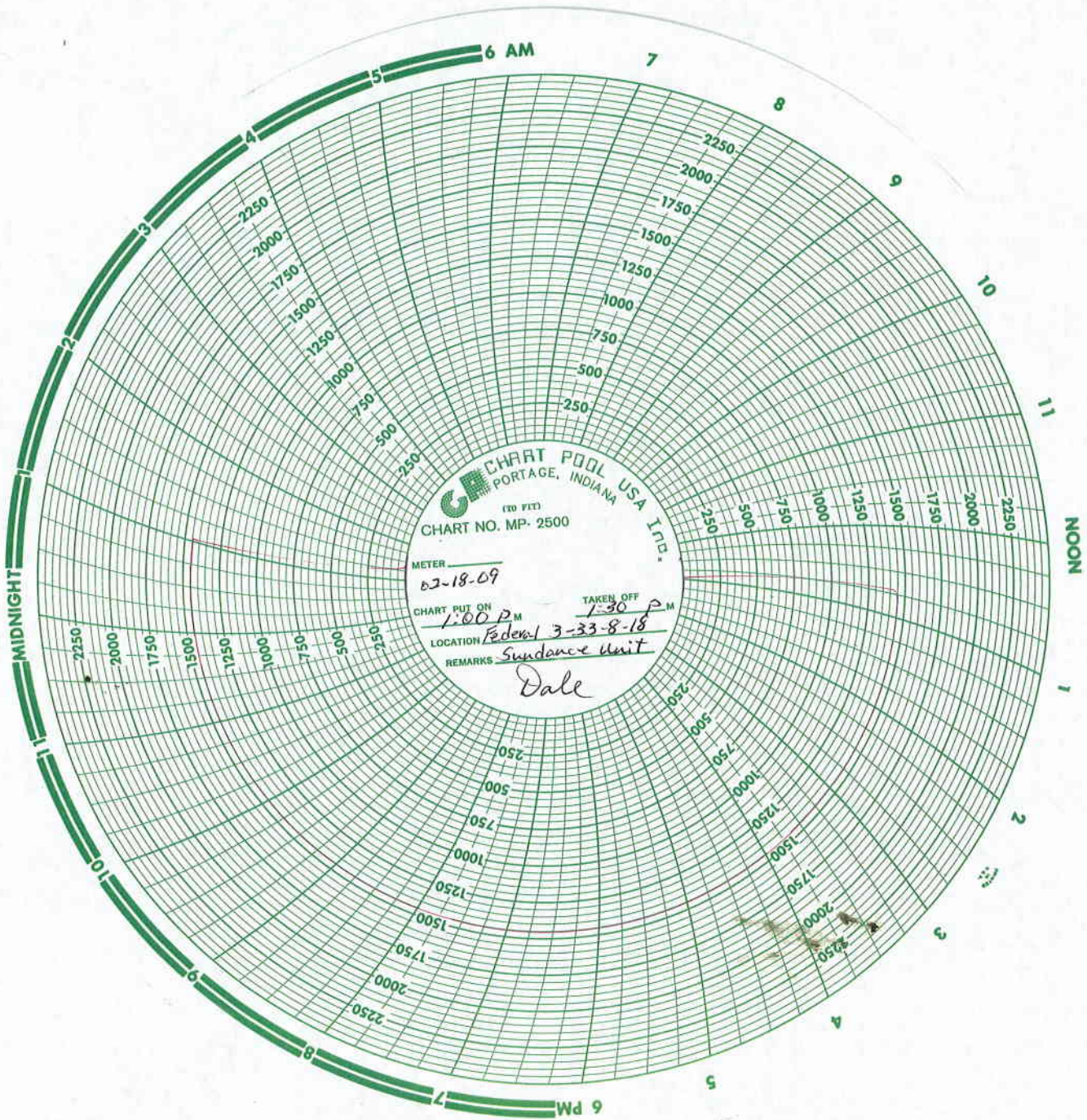
MIT DATA TABLE	Test #1	Test #2	Test #3
<b>TUBING PRESSURE</b>			
Initial Pressure	<u>150</u> psig	psig	psig
End of test pressure	<u>150</u> psig	psig	psig
<b>CASING / TUBING ANNULUS PRESSURE</b>			
0 minutes	<u>1450</u> psig	psig	psig
5 minutes	<u>1450</u> psig	psig	psig
10 minutes	<u>1450</u> psig	psig	psig
15 minutes	<u>1450</u> psig	psig	psig
20 minutes	<u>1450</u> psig	psig	psig
25 minutes	<u>1450</u> psig	psig	psig
30 minutes	<u>1450</u> psig	psig	psig
_____ minutes	psig	psig	psig
_____ minutes	psig	psig	psig
<b>RESULT</b>	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	<input type="checkbox"/> Pass <input type="checkbox"/> Fail

Does the annulus pressure build back up after the test? ☐ Yes ☒ No

## MECHANICAL INTEGRITY PRESSURE TEST

Additional comments for mechanical integrity pressure test, such as volume of fluid added to annulus and bled back at end of test, reason for failing test (casing head leak, tubing leak, other), etc.:

Signature of Witness: \_\_\_\_\_



**FEDERAL 3-33-8-18**  
**11/1/2008 To 5/28/2009**

**2/11/2009 Day: 1**

**Conversion**

Nabors #1111 on 2/10/2009 - MIRU Nabors #1111. Hot oiler had pumped 65 BW down csg @ 250°. RD pumping unit. Rods wouldn't unseat. Hot oiler pumped additional 65 BW down csg. Unseat rod pump. Flush tbg & rods w/ 40 BW @ 250°. LD 75-3/4" guided rods. SWIFN.

---

**2/12/2009 Day: 2**

**Conversion**

Nabors #1111 on 2/11/2009 - Continue LD rods as follows: 100- 3/4" guided rods, 120- 3/4" plain rods, 10- 3/4" guided rods, 6- 1 1/2" weight rods & CDI 2 1/2" X 1 1/2" X 16' RHAC rod pump. X-over for tbg. ND wellhead. NU BOP. TA was not set. TOOH w/ tbg as follows (breaking collars & applying liquid O-ring to threads): 187- jts 2 7/8" J-55 tbg, TA, 2- jts 2 7/8" J-55 tbg, SN, 2- jts 2 7/8" J-55 tbg, NC. SWIFN.

---

**2/13/2009 Day: 3**

**Conversion**

Nabors #1111 on 2/12/2009 - TIH w/ 50- jts 2 7/8" tbg. LD 51- jts 2 7/8" tbg. PU & TIH w/ injection string as follows: Arrowset 1-X packer, SN, 141- jts 2 7/8" J-55 tbg. Flush tbg w/ 40 BW. Drop standing valve. Fill tbg & pressure test to 3000 psi. Pressure test was not holding. RU sandline. RIH w/ fishing tool on sandline & retrieve standing valve. Drop new standing valve & pressure tbg to 3000 psi. SWIFN.

---

**2/14/2009 Day: 4**

**Conversion**

Nabors #1111 on 2/13/2009 - Check pressure on tbg, 2300 psi, lost 700 psi over night. Bleed gas off tbg & pressure to 3000 psi. Lost 200 psi in 20 min. Bleed pressure off well. TOOH w/ 70- jts tbg. Pressure tbg to 3000 psi, no test. TOOH w/ 36- jts tbg & pressure to 3000 psi, no test. TOOH w/ 18- jts tbg & pressure to 3000 psi, no test. TOOH w/ 16- jts tbg & packer. LD packer & pressure 1- jt to 3000 psi, no test. Change out SN, pressure test to 3000 psi, good test. TIH w/ 40- jts tbg & pressure test to 3000 psi, good test. TIH w/ 50- jts tbg, pressure test to 3000 psi, good test. TIH w/ 52- jts tbg & pressure test tbg to 3000 psi, held test for 30 minutes w/ 0 psi loss. RIH w/ fishing tool on standing valve & retrieve standing valve. RD sandline. SWIFN.

---

**2/18/2009 Day: 5**

**Conversion**

Nabors #1111 on 2/17/2009 - RD rig floor. ND BOPs. NU wellhead. RU hot oiler. Pump 60 bbls packer fluid down tbg- csg annulus. ND wellhead. Set Arrowset 1-X packer w/ CE @ 4444' & EOT @ 4449'. NU wellhead. Fill tbg- csg annulus w/ 35 bbls packer fluid. Pressure annulus to 1400 psi. Held pressure test for 30 minutes w/ 0 psi loss. RDMOSU. Ready for MIT!

---

**2/19/2009 Day: 6**

**Conversion**

Rigless on 2/18/2009 - On 2/13/09 Margo Smith with the EPA was contacted concerning the initial MIT on the above listed well

(Fed 3-33-8-17). Permission was given at that time to perform the test on 2/18/09. On 2/18/09 the csg was pressured up to 1450 psig and charted for 30 minutes with no pressure loss. The tbq pressure was 150 psig during the test. There was not an EPA representative available to witness the test. EPA# UT21101-07423 API# 43-047-35979

---



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 8

1595 Wynkoop Street  
DENVER, CO 80202-1129  
Phone 800-227-8917  
<http://www.epa.gov/region08>

**MAR 12 2009**

Ref: 8P-W-GW

**CERTIFIED MAIL**  
**RETURN RECEIPT REQUESTED**

Michael Guinn  
District Manager  
Newfield Production Company  
Route 3 - Box 3630  
Myton, UT 84052

**Accepted by the  
Utah Division of  
Oil, Gas and Mining  
FOR RECORD ONLY**

85 18E 33  
RE: Authority to Commence Injection  
EPA UIC Permit UT21101-07423  
Federal No. 3-33-8-18  
Uintah County, Utah  
API #: 43-047-35979

Dear Mr. Guinn:

Newfield Production Company (Newfield) has satisfactorily completed Environmental Protection Agency (EPA) **Prior to Commencing Injection** requirements for Final Permit, UT21101-07423, effective November 20, 2008. The Part I (Internal) Mechanical Integrity Test (MIT), Well Rework Record (EPA Form No. 7520-12), schematic diagram, and pore pressure, were reviewed and approved by EPA on March 9, 2009.

As of the date of this letter, Newfield is authorized to commence injection into Federal No. 3-33-8-18 at a maximum allowable injection pressure (MAIP) of **1,160 psig**. Until such time as the Permittee demonstrates through a Step Rate Test (SRT) that the Fracture Gradient (FG) is other than 0.070 psi/ft, Federal No. 3-33-8-18 shall be operated at a MAIP no greater than **1,160 psig**.

**RECEIVED**  
**MAR 17 2009**  
**DIV. OF OIL, GAS & MINING**

As of this approval, responsibility for permit compliance and enforcement is transferred to Region 8 UIC Technical Enforcement Program office. Therefore, please direct all monitoring and compliance correspondence to the following address, referencing your well name and UIC Permit number on all correspondence regarding this well to:

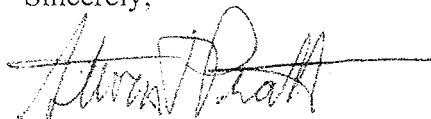
Mr. Nathan Wiser  
Technical Enforcement Program – UIC  
U.S. EPA Region 8: Mail Code 8ENF-UFO  
1595 Wynkoop Street  
Denver, CO 80202-1129

Or, you may reach Mr. Wiser by telephone at 303-312-6211, or 1 800-227-8927, ext. 312-6211.

Please remember that it is your responsibility to be aware of and to comply with all conditions of injection well Permit UT21101 -07423.

If you have questions regarding the above action, please call Emmett Schmitz at 303-312-6174 or 1-800-227-8917, ext. 312-6174.

Sincerely,



Steven Pratt, P.E., CAPM (Inactive)  
Director, Ground Water Program

cc: Uintah & Ouray Business Committee, Ute Indian Tribe  
Curtis Cesspooch, Chairman  
Irene Cuch, Vice-Chairwoman  
Frances Poowegup, Councilwoman  
Ronald Groves, Councilman  
Phillip Chimburas, Councilman  
Steven Cesspooch, Councilman

Daniel Picard, Superintendent  
Uintah & Ouray Indian Agency  
U.S. Bureau of Indian Affairs

Eric Sundberg  
Newfield Production Company  
Denver, CO

Larry Love  
Director  
Energy & Minerals Dept.  
Ute Indian Tribe

Ferron Secakuku  
Director  
Natural Resources  
Ute Indian Tribe

Gilbert Hunt  
Associate Director  
State of Utah – Division of Oil, Gas & Mining

Fluid Minerals Engineering Dept.  
U.S. Bureau of Land Management  
Vernal, Utah

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

**SUNDRY NOTICES AND REPORTS ON WELLS**  
**Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.**

FORM APPROVED  
OMB No. 1004-0137  
Expires: July 31, 2010

**SUBMIT IN TRIPLICATE - Other Instructions on page 2**

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator

NEWFIELD PRODUCTION COMPANY

3a. Address Route 3 Box 3630

Myton, UT 84052

3b. Phone (include area code)

435.646.3721

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

272 FNL 1594 FWL

NENW Section 33 T8S R18E

5. Lease Serial No.

USA UTU-74872

6. If Indian, Allottee or Tribe Name.

7. If Unit or CA/Agreement, Name and/or

SUNDANCE UNIT

8. Well Name and No.

FEDERAL 3-33-8-18

9. API Well No.

4304735979

10. Field and Pool, or Exploratory Area

MONUMENT BUTTE

11. County or Parish, State

UINTAH, UT

**12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, OR OTHER DATA**

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other _____
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug & Abandon	<input type="checkbox"/> Temporarily Abandon	Change status, put well
	<input checked="" type="checkbox"/> Convert to Injector	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	on injection

13. Describe Proposed or Completed Operation: (Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

The above reference well was put on injection at 2:00 PM on 3-23-09.

UT 21101-07423

**Accepted by the  
Utah Division of  
Oil, Gas and Mining  
FOR RECORD ONLY**

I hereby certify that the foregoing is true and correct (Printed/ Typed)

Kathy Chapman

Signature



Title

Office Manager

Date

03/24/2009

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved by

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Title

Office

Date

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious and fraudulent statements or representations as to any matter within its jurisdiction

(Instructions on page 2)

**RECEIVED**

**MAR 26 2009**

**DIV. OF OIL, GAS & MINING**

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

**SUNDRY NOTICES AND REPORTS ON WELL**  
**Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.**

**SUBMIT IN TRIPLICATE - Other Instructions on page 2**

1. Type of Well  
☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator  
NEWFIELD PRODUCTION COMPANY

3a. Address Route 3 Box 3630  
Myton, UT 84052

3b. Phone (include area code)  
435.646.3721

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)  
272 FNL 1594 FWL  
NENW Section 33 T8S R18E

FORM APPROVED  
OMB No. 1004-0137  
Expires: July 31, 2010

5. Lease Serial No.

USA UTU-74872

6. If Indian, Allottee or Tribe Name.

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SUNDANCE UNIT

8. Well Name and No.

FEDERAL 3-33-8-18

9. API Well No.

4304735979

10. Field and Pool, or Exploratory Area

MONUMENT BUTTE

11. County or Parish, State

UINTAH, UT

**12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, OR OTHER DATA**

TYPE OF SUBMISSION	TYPE OF ACTION				
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off	
<input checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity	
<input type="checkbox"/> Final Abandonment	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other _____	
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug & Abandon	<input type="checkbox"/> Temporarily Abandon	Step Rate Test _____	
	<input type="checkbox"/> Convert to Injector	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal		

13. Describe Proposed or Completed Operation: (Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

A step rate test was conducted on the subject well on August 19, 2009. Results from the test indicate that the fracture gradient is .725 psi/ft. Therefore, Newfield is requesting that the maximum allowable injection pressure (MAIP) be changed to 1270 psi.

**Accepted by the  
Utah Division of  
Oil, Gas and Mining  
FOR RECORD ONLY**

I hereby certify that the foregoing is true and correct *Printed/ Typed*

Chevenne Bateman

Signature

Title

Well Analyst Foreman

Date

08/27/2009

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved by \_\_\_\_\_

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Title

Date

Office

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious and fraudulent statements or representations as to any matter within its jurisdiction

(Instructions on page 2)

**RECEIVED**

**AUG 31 2009**

**DIV. OF OIL, GAS & MINING**

## Step Rate Test (SRT) Analysis

Date: 08/27/2009

Operator:

Newfield Production Company

Well:

Federal 3-33-8-18

Permit #:

UT21101-07423

**Enter the following data :**

Specific Gravity (sg) of injectate = 1.015 g/cc  
Depth to top perforation (D) = 4460 feet 4460  
Top of permitted injection zone depth (blank=use top perforation to calculate fg) = \_\_\_\_\_ feet  
Estimated Formation Parting Pressure (Pfp) from SRT chart = 1275 psi 1275  
Instantaneous Shut In Pressure (ISIP) from SRT = 1335 psi 1275  
Bottom Hole Parting Pressure (Pbhp) from downhole pressure recorder = \_\_\_\_\_ psi no downhole

### Part One - Calculation of Fracture Gradient (fg)

Calculated Fracture Gradient = 0.725 psi/ft.

where: fg = Pbhp / D (Note: this formula uses the downhole recorded bottom hole parting pressure if available) = 1335

D = depth used = 4460

Pbhp used = 3235

Calculated Bottom Hole Parting Pressure (Pbhp) = 3235 psi 3235.148

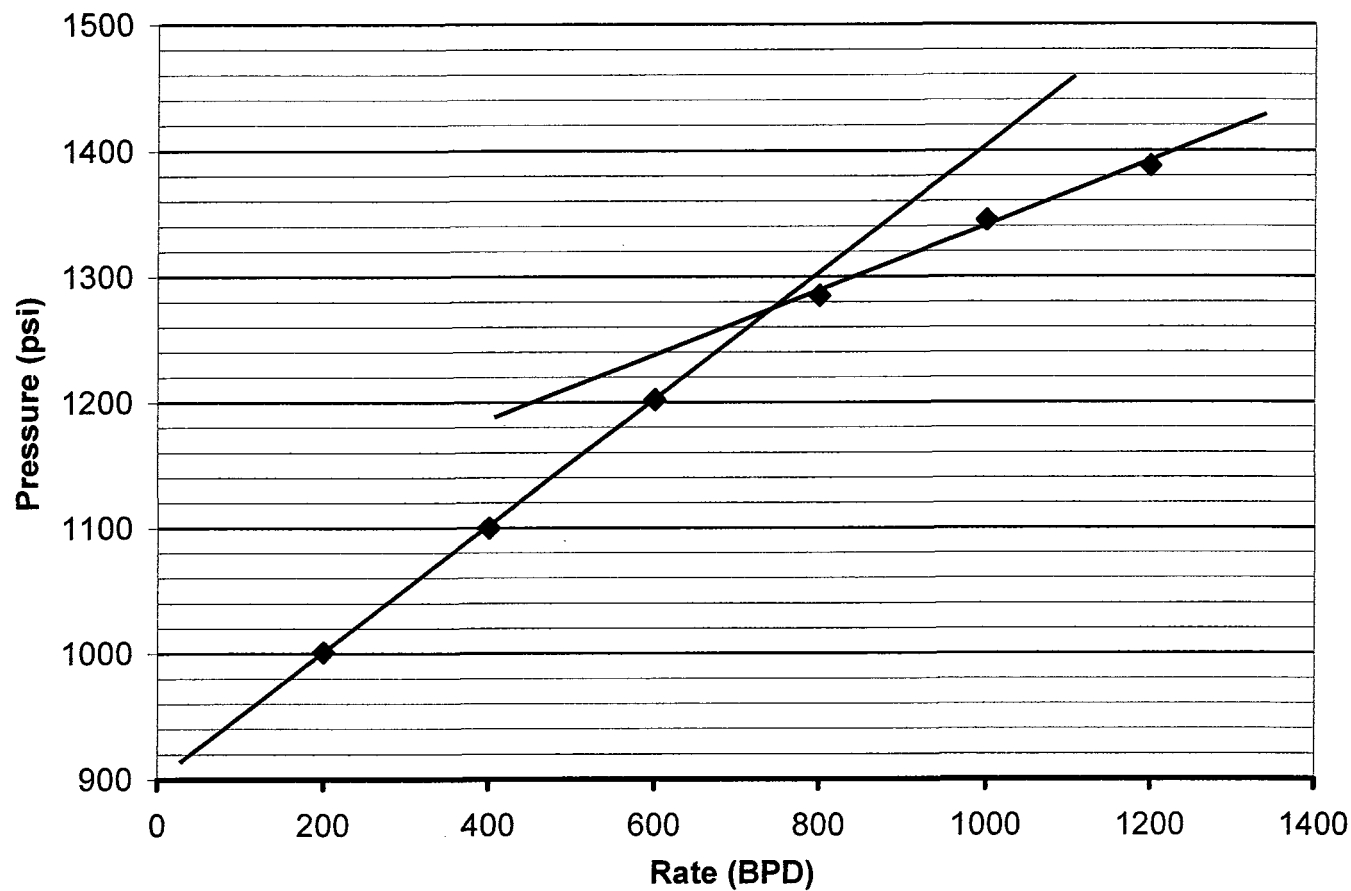
to calculate Bottom Hole Parting Pressure (Pbhp) = Formation Fracture Pressure (ISIP or Pfp) + (0.433 \* SG \* D)

(Uses lesser of ISIP or Pfp) Value used = 1275

### Part Two - Calculation of Maximum Allowable Injection Pressure (MAIP)

Maximum Allowable Injection Pressure (MAIP) = 1270 psig  
D = depth used = 4460 MAIP = [(fg \* (0.433 \* SG)) \* D] = 1273.352 (rounded down to nearest 5 psig)

Federal 3-33-8-18  
Sundance Unit  
Step Rate Test  
August 19, 2009



Start Pressure: 935 psi  
Instantaneous Shut In Pressure (ISIP): 1335 psi  
Top Perforation: 4460 feet  
Fracture pressure (Pfp): 1275 psi  
FG: 0.725 psi/ft

Step	Rate(bpd)	Pressure(psi)
1	200	1001
2	400	1100
3	600	1202
4	800	1285
5	1000	1345
6	1200	1388

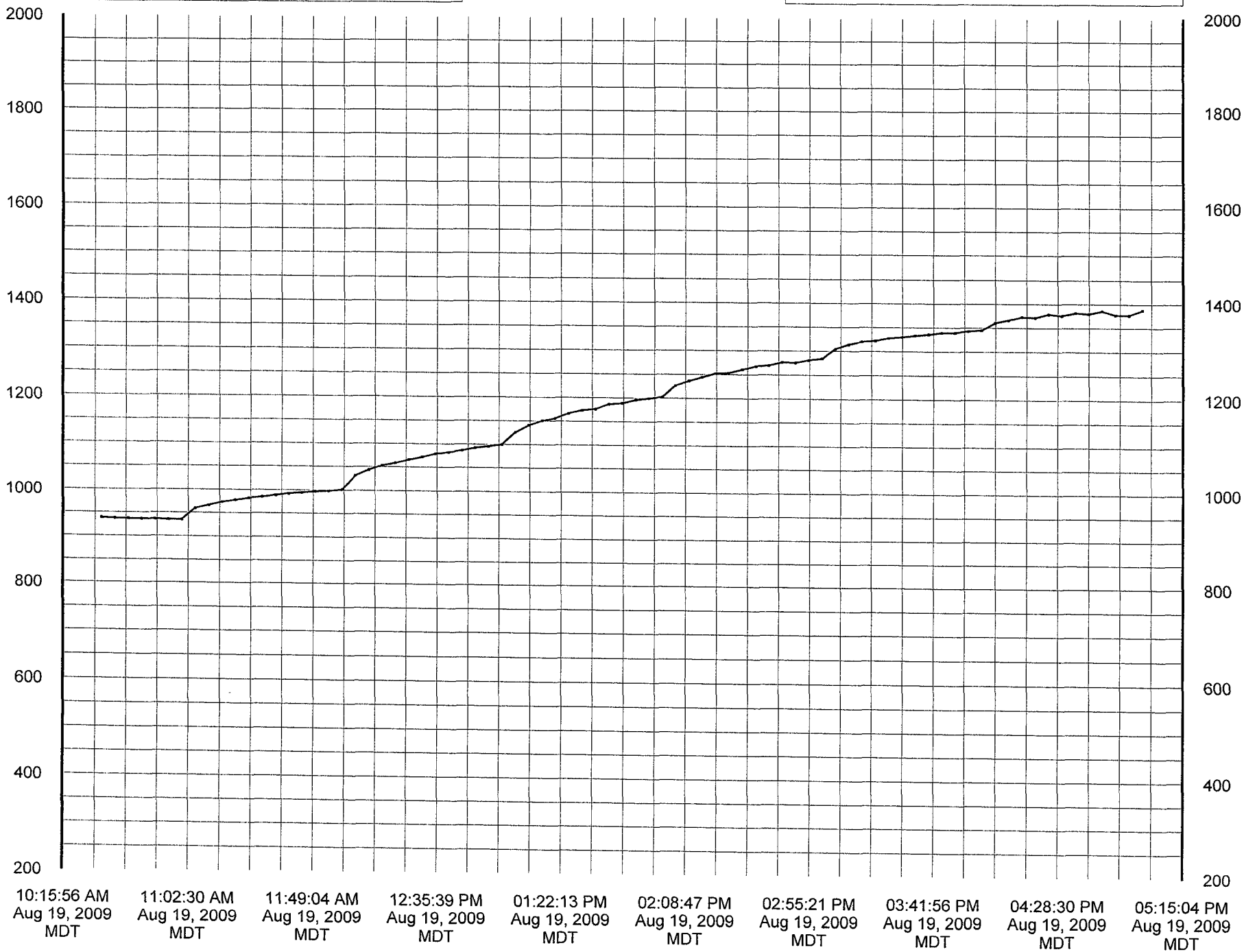
PSIA

Absolute Pressure

Federal 3-33-8-18 SRT (8-19-09)

Device - PrTemp1000  
Serial Number - M75866  
Device ID - PrTemp

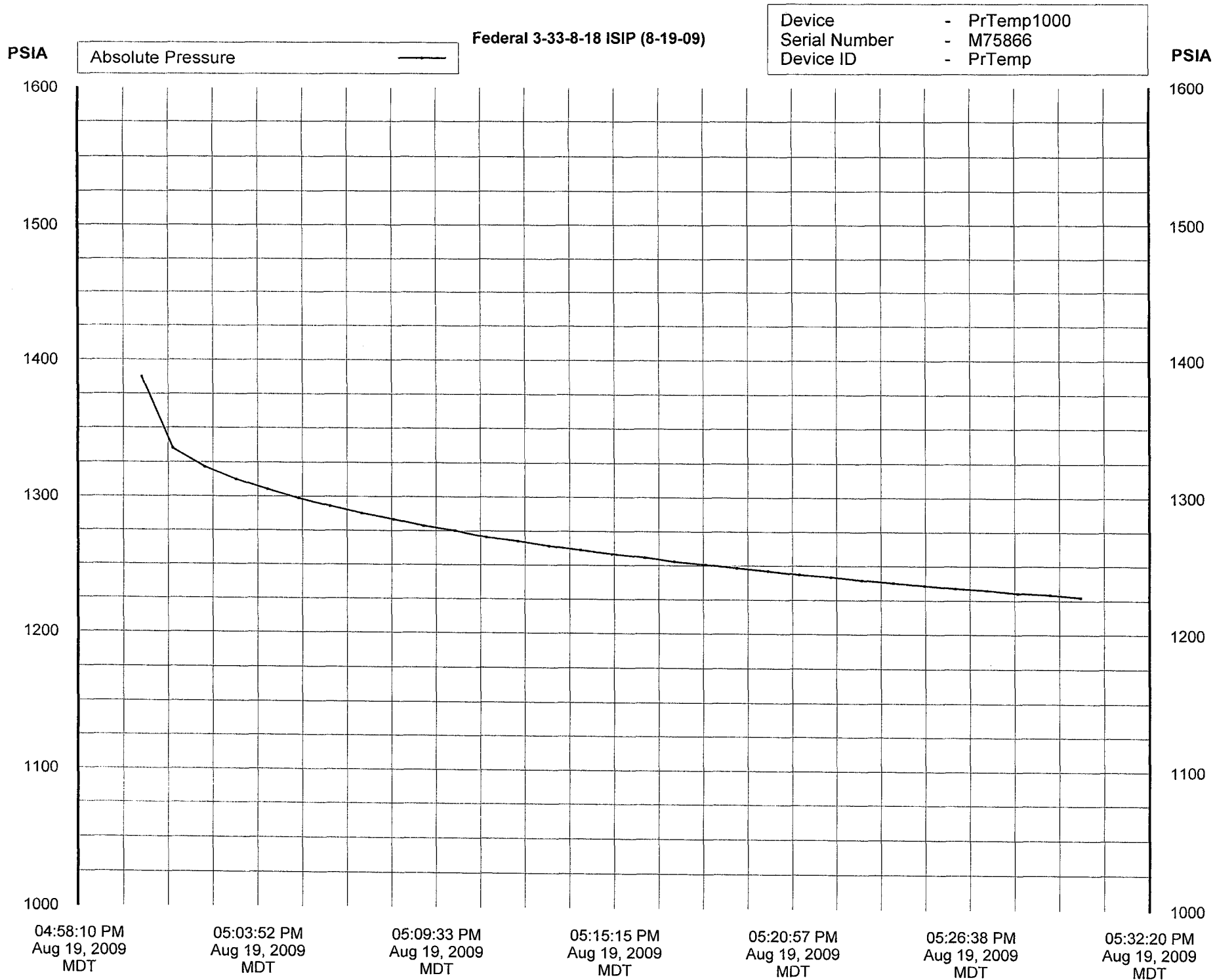
PSIA



Report Name: PrTemp1000 Data Table  
 Report Date: Aug 21, 2009 09:08:39 AM MDT  
 File Name: S:\Welinfo\PTC® Instruments 2.00\Federal 3-33-8-18 SRT (8-19-09).csv  
 Title: Federal 3-33-8-18 SRT (8-19-09)  
 Device: PrTemp1000 - Temperature and Pressure Recorder  
 Hardware Revision: REV2C (64K)  
 Serial Number: M75866  
 Device ID: PrTemp  
 Data Start Date: Aug 19, 2009 10:30:00 AM MDT  
 Data End Date: Aug 19, 2009 05:00:00 PM MDT  
 Reading Rate: 2 Seconds  
 Readings: 1 to 79 of 79  
 Last Calibration Date: May 22, 2009  
 Next Calibration Date: May 22, 2010

<u>Reading</u>	<u>Date and Time (MDT)</u>	<u>Absolute Pressure</u>	<u>Annotation</u>
1	Aug 19, 2009 10:30:00 AM	938.200	PSIA
2	Aug 19, 2009 10:34:59 AM	937.400	PSIA
3	Aug 19, 2009 10:40:01 AM	937.000	PSIA
4	Aug 19, 2009 10:44:59 AM	936.400	PSIA
5	Aug 19, 2009 10:50:01 AM	936.200	PSIA
6	Aug 19, 2009 10:55:00 AM	935.600	PSIA
7	Aug 19, 2009 11:00:01 AM	935.200	PSIA
8	Aug 19, 2009 11:05:01 AM	959.600	PSIA
9	Aug 19, 2009 11:10:01 AM	966.400	PSIA
10	Aug 19, 2009 11:15:01 AM	973.600	PSIA
11	Aug 19, 2009 11:20:00 AM	977.800	PSIA
12	Aug 19, 2009 11:25:01 AM	982.400	PSIA
13	Aug 19, 2009 11:29:59 AM	985.200	PSIA
14	Aug 19, 2009 11:35:01 AM	988.600	PSIA
15	Aug 19, 2009 11:40:00 AM	992.200	PSIA
16	Aug 19, 2009 11:45:01 AM	994.600	PSIA
17	Aug 19, 2009 11:50:01 AM	996.400	PSIA
18	Aug 19, 2009 11:55:01 AM	998.200	PSIA
19	Aug 19, 2009 12:00:00 PM	1001.200	PSIA
20	Aug 19, 2009 12:04:59 PM	1031.800	PSIA
21	Aug 19, 2009 12:10:00 PM	1043.800	PSIA
22	Aug 19, 2009 12:14:59 PM	1053.200	PSIA
23	Aug 19, 2009 12:20:00 PM	1058.600	PSIA
24	Aug 19, 2009 12:24:59 PM	1066.000	PSIA
25	Aug 19, 2009 12:30:01 PM	1071.800	PSIA
26	Aug 19, 2009 12:35:00 PM	1079.400	PSIA
27	Aug 19, 2009 12:40:00 PM	1082.400	PSIA
28	Aug 19, 2009 12:45:00 PM	1087.200	PSIA
29	Aug 19, 2009 12:49:59 PM	1092.600	PSIA
30	Aug 19, 2009 12:55:00 PM	1095.600	PSIA
31	Aug 19, 2009 12:59:59 PM	1099.600	PSIA
32	Aug 19, 2009 01:05:00 PM	1125.800	PSIA
33	Aug 19, 2009 01:10:00 PM	1140.800	PSIA
34	Aug 19, 2009 01:15:00 PM	1150.600	PSIA
35	Aug 19, 2009 01:20:00 PM	1156.000	PSIA
36	Aug 19, 2009 01:25:00 PM	1166.800	PSIA
37	Aug 19, 2009 01:30:00 PM	1173.600	PSIA
38	Aug 19, 2009 01:35:00 PM	1176.400	PSIA
39	Aug 19, 2009 01:40:00 PM	1186.800	PSIA
40	Aug 19, 2009 01:44:59 PM	1189.000	PSIA
41	Aug 19, 2009 01:50:00 PM	1195.800	PSIA
42	Aug 19, 2009 01:54:59 PM	1199.600	PSIA
43	Aug 19, 2009 02:00:00 PM	1202.400	PSIA
44	Aug 19, 2009 02:05:00 PM	1227.000	PSIA
45	Aug 19, 2009 02:10:00 PM	1236.400	PSIA
46	Aug 19, 2009 02:15:00 PM	1244.600	PSIA
47	Aug 19, 2009 02:19:59 PM	1252.400	PSIA
48	Aug 19, 2009 02:25:00 PM	1253.600	PSIA
49	Aug 19, 2009 02:29:59 PM	1260.800	PSIA
50	Aug 19, 2009 02:35:09 PM	1267.800	PSIA
51	Aug 19, 2009 02:39:59 PM	1269.600	PSIA
52	Aug 19, 2009 02:45:00 PM	1276.800	PSIA
53	Aug 19, 2009 02:50:01 PM	1275.600	PSIA
54	Aug 19, 2009 02:55:00 PM	1281.000	PSIA
55	Aug 19, 2009 03:00:00 PM	1284.600	PSIA
56	Aug 19, 2009 03:04:59 PM	1305.000	PSIA
57	Aug 19, 2009 03:10:00 PM	1314.200	PSIA
58	Aug 19, 2009 03:14:59 PM	1320.200	PSIA
59	Aug 19, 2009 03:20:00 PM	1322.400	PSIA
60	Aug 19, 2009 03:24:59 PM	1328.200	PSIA

61	Aug 19, 2009 03:30:00 PM	1330.400	PSIA
62	Aug 19, 2009 03:35:00 PM	1333.600	PSIA
63	Aug 19, 2009 03:40:01 PM	1336.000	PSIA
64	Aug 19, 2009 03:45:01 PM	1339.600	PSIA
65	Aug 19, 2009 03:49:59 PM	1340.000	PSIA
66	Aug 19, 2009 03:55:01 PM	1343.200	PSIA
67	Aug 19, 2009 03:59:59 PM	1345.200	PSIA
68	Aug 19, 2009 04:05:00 PM	1360.800	PSIA
69	Aug 19, 2009 04:09:59 PM	1366.600	PSIA
70	Aug 19, 2009 04:15:01 PM	1373.200	PSIA
71	Aug 19, 2009 04:20:00 PM	1372.200	PSIA
72	Aug 19, 2009 04:25:00 PM	1379.400	PSIA
73	Aug 19, 2009 04:30:00 PM	1376.200	PSIA
74	Aug 19, 2009 04:34:59 PM	1381.800	PSIA
75	Aug 19, 2009 04:40:00 PM	1380.200	PSIA
76	Aug 19, 2009 04:44:59 PM	1386.000	PSIA
77	Aug 19, 2009 04:50:00 PM	1377.800	PSIA
78	Aug 19, 2009 04:54:59 PM	1377.400	PSIA
79	Aug 19, 2009 05:00:00 PM	1388.000	PSIA



Report Name: PrTemp1000 Data Table  
 Report Date: Aug 21, 2009 09:08:31 AM MDT  
 File Name: S:\Welinfo\PTC@ Instruments 2.00\Federal 3-33-8-18 ISIP (8-19-09).csv  
 Title: Federal 3-33-8-18 ISIP (8-19-09)  
 Device: PrTemp1000 - Temperature and Pressure Recorder  
 Hardware Revision: REV2C (64K)  
 Serial Number: M75866  
 Device ID: PrTemp  
 Data Start Date: Aug 19, 2009 05:00:11 PM MDT  
 Data End Date: Aug 19, 2009 05:30:10 PM MDT  
 Reading Rate: 2 Seconds  
 Readings: 1 to 31 of 31  
 Last Calibration Date: May 22, 2009  
 Next Calibration Date: May 22, 2010

<u>Reading</u>	<u>Date and Time (MDT)</u>	<u>Absolute Pressure</u>	<u>Annotation</u>
1	Aug 19, 2009 05:00:11 PM	1387.400	PSIA
2	Aug 19, 2009 05:01:10 PM	1335.200	PSIA
3	Aug 19, 2009 05:02:10 PM	1321.800	PSIA
4	Aug 19, 2009 05:03:10 PM	1312.600	PSIA
5	Aug 19, 2009 05:04:10 PM	1305.200	PSIA
6	Aug 19, 2009 05:05:10 PM	1298.600	PSIA
7	Aug 19, 2009 05:06:10 PM	1293.000	PSIA
8	Aug 19, 2009 05:07:11 PM	1287.800	PSIA
9	Aug 19, 2009 05:08:12 PM	1283.200	PSIA
10	Aug 19, 2009 05:09:10 PM	1278.600	PSIA
11	Aug 19, 2009 05:10:10 PM	1275.200	PSIA
12	Aug 19, 2009 05:11:10 PM	1270.600	PSIA
13	Aug 19, 2009 05:12:10 PM	1267.800	PSIA
14	Aug 19, 2009 05:13:10 PM	1264.200	PSIA
15	Aug 19, 2009 05:14:10 PM	1261.400	PSIA
16	Aug 19, 2009 05:15:11 PM	1258.400	PSIA
17	Aug 19, 2009 05:16:13 PM	1256.000	PSIA
18	Aug 19, 2009 05:17:10 PM	1253.000	PSIA
19	Aug 19, 2009 05:18:10 PM	1250.800	PSIA
20	Aug 19, 2009 05:19:10 PM	1248.400	PSIA
21	Aug 19, 2009 05:20:10 PM	1246.200	PSIA
22	Aug 19, 2009 05:21:10 PM	1243.800	PSIA
23	Aug 19, 2009 05:22:11 PM	1242.000	PSIA
24	Aug 19, 2009 05:23:10 PM	1239.800	PSIA
25	Aug 19, 2009 05:24:11 PM	1237.800	PSIA
26	Aug 19, 2009 05:25:11 PM	1236.000	PSIA
27	Aug 19, 2009 05:26:10 PM	1234.000	PSIA
28	Aug 19, 2009 05:27:10 PM	1232.600	PSIA
29	Aug 19, 2009 05:28:10 PM	1230.400	PSIA
30	Aug 19, 2009 05:29:11 PM	1229.400	PSIA
31	Aug 19, 2009 05:30:10 PM	1227.400	PSIA

# *Federal 3-33-8-18 Rate Sheet (8-19-09)*

*Step # 1*

Time:	11:05	11:10	11:15	11:20	11:25	11:30
Rate:	200.4	200.4	200.4	200.4	200.3	200.3
Time:	11:35	11:40	11:45	11:50	11:55	12:00
Rate:	200.3	200.3	200.2	200.2	200.1	200.1

*Step # 2*

Time:	12:05	12:10	12:15	12:20	12:25	12:30
Rate:	400.7	400.7	400.6	400.6	400.6	400.6
Time:	12:35	12:40	12:45	12:50	12:55	1:00
Rate:	400.6	400.5	400.5	400.5	400.5	400.4

*Step # 3*

Time:	1:05	1:10	1:15	1:20	1:25	1:30
Rate:	600.5	600.5	600.5	600.4	600.4	600.4
Time:	1:35	1:40	1:45	1:50	1:55	2:00
Rate:	600.4	600.4	600.3	600.3	600.3	600.3

*Step # 4*

Time:	2:05	2:10	2:15	2:20	2:25	2:30
Rate:	800.5	800.5	800.5	800.5	800.3	800.3
Time:	2:35	2:40	2:45	2:50	2:55	3:00
Rate:	800.3	800.2	800.1	800.1	800	800

*Step # 5*

Time:	3:05	3:10	3:15	3:20	3:25	3:30
Rate:	1000.6	1000.5	1000.4	1000.4	1000.4	1000.3
Time:	3:35	3:40	3:45	3:50	3:55	4:00
Rate:	1000.3	1000.2	1000.2	1000.2	1000.1	1000.1

*Step # 6*

Time:	4:05	4:10	4:15	4:20	4:25	4:30
Rate:	1200.4	1200.4	1200.4	1200.4	1200.3	1200.3
Time:	4:35	4:40	4:45	4:50	4:55	5:00
Rate:	1200.2	1200.1	1200.1	1200	1200	1200





<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU-74872
<b>1. TYPE OF WELL</b> Water Injection Well		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>
<b>2. NAME OF OPERATOR:</b> NEWFIELD PRODUCTION COMPANY		<b>7. UNIT or CA AGREEMENT NAME:</b> GMBU (GRRV)
<b>3. ADDRESS OF OPERATOR:</b> Rt 3 Box 3630, Myton, UT, 84052		<b>8. WELL NAME and NUMBER:</b> FEDERAL 3-33-8-18
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0425 FNL 1594 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NENW Section: 33 Township: 08.0S Range: 18.0E Meridian: S		<b>9. API NUMBER:</b> 43047359790000
<b>PHONE NUMBER:</b> 435 646-4825 Ext		<b>9. FIELD and POOL or WILDCAT:</b> 8 MILE FLAT NORTH
<b>COUNTY:</b> UINTAH		<b>STATE:</b> UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE  <input type="checkbox"/> CHANGE TO PREVIOUS PLANS  <input type="checkbox"/> CHANGE WELL STATUS  <input type="checkbox"/> DEEPEN  <input type="checkbox"/> OPERATOR CHANGE  <input type="checkbox"/> PRODUCTION START OR RESUME  <input type="checkbox"/> REPERFORATE CURRENT FORMATION  <input type="checkbox"/> TUBING REPAIR  <input type="checkbox"/> WATER SHUTOFF  <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> ALTER CASING  <input type="checkbox"/> CHANGE TUBING  <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS  <input type="checkbox"/> FRACTURE TREAT  <input type="checkbox"/> PLUG AND ABANDON  <input type="checkbox"/> RECLAMATION OF WELL SITE  <input type="checkbox"/> SIDETRACK TO REPAIR WELL  <input type="checkbox"/> VENT OR FLARE  <input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> CASING REPAIR  <input type="checkbox"/> CHANGE WELL NAME  <input type="checkbox"/> CONVERT WELL TYPE  <input type="checkbox"/> NEW CONSTRUCTION  <input type="checkbox"/> PLUG BACK  <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION  <input type="checkbox"/> TEMPORARY ABANDON  <input type="checkbox"/> WATER DISPOSAL  <input type="checkbox"/> APD EXTENSION	<input checked="" type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: <b>1/9/2014</b>
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input checked="" type="checkbox"/> OTHER			
<input type="checkbox"/> DRILLING REPORT Report Date:	OTHER: <input style="width: 100px;" type="text" value="5 YR MIT"/>			

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.  

5 YR MIT performed on the above listed well. On 01/09/2014 the casing was pressured up to 1512 psig and charted for 30 minutes with no pressure loss. The well was not injecting during the test. The tbq pressure was 994 psig during the test. There was not an EPA representative available to witness the test. EPA #UT22197-07423

**Accepted by the  
Utah Division of  
Oil, Gas and Mining**

**FOR RECORD ONLY**

January 13, 2014

<b>NAME (PLEASE PRINT)</b> Lucy Chavez-Naupoto	<b>PHONE NUMBER</b> 435 646-4874	<b>TITLE</b> Water Services Technician
<b>SIGNATURE</b> N/A	<b>DATE</b> 1/10/2014	

**Mechanical Integrity Test****Casing or Annulus Pressure Mechanical Integrity Test**

U.S. Environmental Protection Agency  
Underground Injection Control Program  
999 18<sup>th</sup> Street, Suite 500 Denver, CO 80202-2466

EPA Witness: \_\_\_\_\_ Date: 1 / 9 / 14Test conducted by: Rocky CURRY

Others present: \_\_\_\_\_

Well Name: <u>FEDERAL 3-33-8-18</u>	Type: ER SWD	Status: AC TA UC
Field: <u>GREATER MONUMENT BUTTE</u>		
Location: <u>NE/NW</u> Sec: <u>33</u> T: <u>8</u> N/S: <u>R 18 E</u> W County: <u>UINTAH</u>		State: <u>UT</u>
Operator: <u>NEWFIELD EXPLORATION</u>		
Last MIT: <u>      </u> / <u>      </u> / <u>      </u>	Maximum Allowable Pressure: <u>1025</u>	PSIG

Is this a regularly scheduled test? ☒ Yes ☐ No  
 Initial test for permit? ☐ Yes ☒ No  
 Test after well rework? ☐ Yes ☒ No  
 Well injecting during test? ☒ Yes ☐ No If Yes, rate: 24 bpd

Pre-test casing/tubing annulus pressure: 0/993 psig

MIT DATA TABLE	Test #1	Test #2	Test #3
<b>TUBING PRESSURE</b>			
Initial Pressure	<u>993</u> psig	psig	psig
End of test pressure	<u>994</u> psig	psig	psig
<b>CASING / TUBING ANNULUS PRESSURE</b>			
0 minutes	<u>1512</u> psig	psig	psig
5 minutes	<u>1512</u> psig	psig	psig
10 minutes	<u>1512</u> psig	psig	psig
15 minutes	<u>1512</u> psig	psig	psig
20 minutes	<u>1512</u> psig	psig	psig
25 minutes	<u>1512</u> psig	psig	psig
30 minutes	<u>1512</u> psig	psig	psig
_____ minutes	psig	psig	psig
_____ minutes	psig	psig	psig
<b>RESULT</b>	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	<input type="checkbox"/> Pass <input type="checkbox"/> Fail

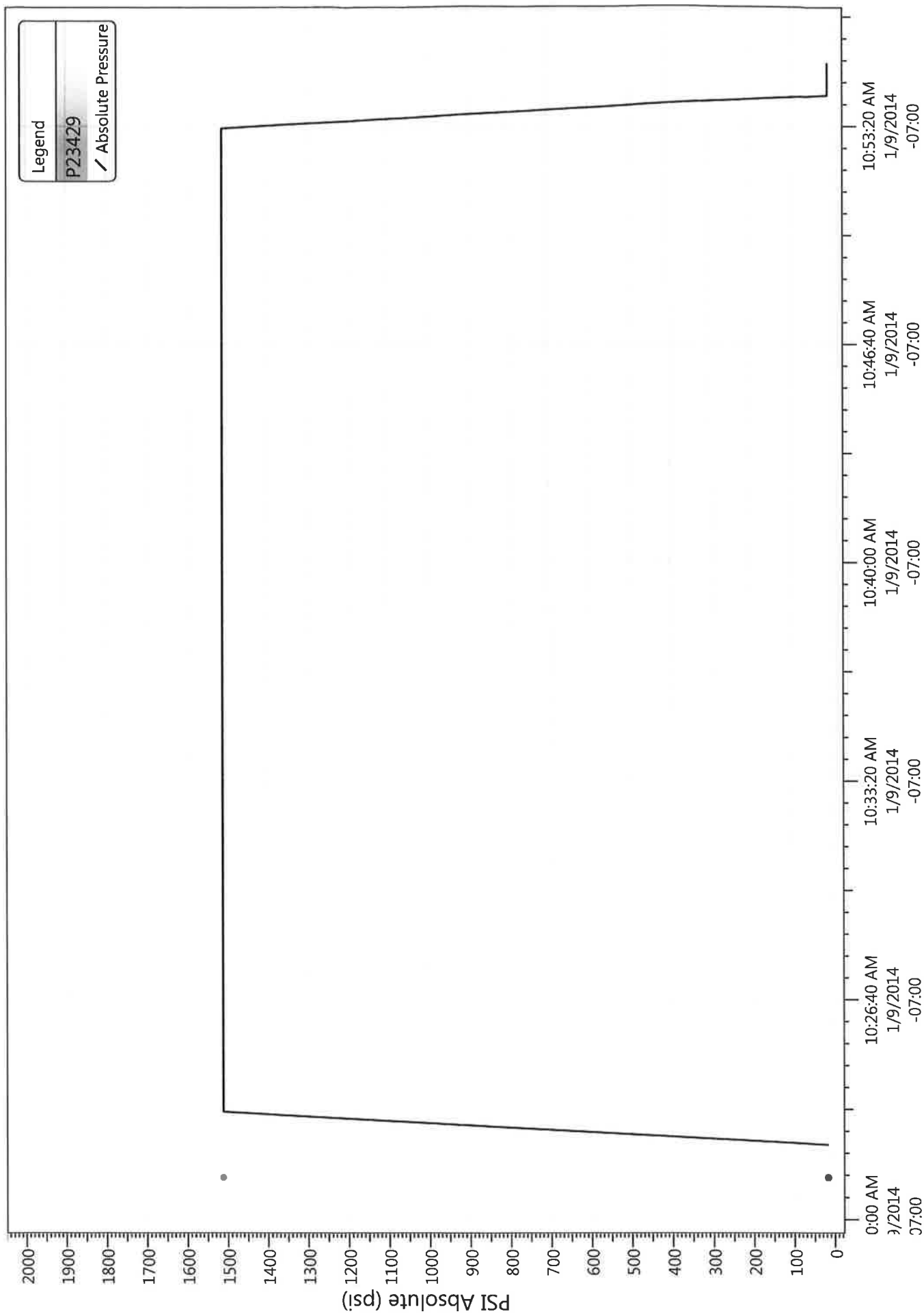
Does the annulus pressure build back up after the test? ☐ Yes ☒ No**MECHANICAL INTEGRITY PRESSURE TEST**

Additional comments for mechanical integrity pressure test, such as volume of fluid added to annulus and bled back at end of test, reason for failing test (casing head leak, tubing leak, other), etc.:

Signature of Witness: \_\_\_\_\_

# Federal 3-33-8-18 MIT (1-9-14)

1/9/2014 10:20:50 AM



## NEWFIELD



## Schematic

43-047-35979

Well Name: Federal 3-33-8-18

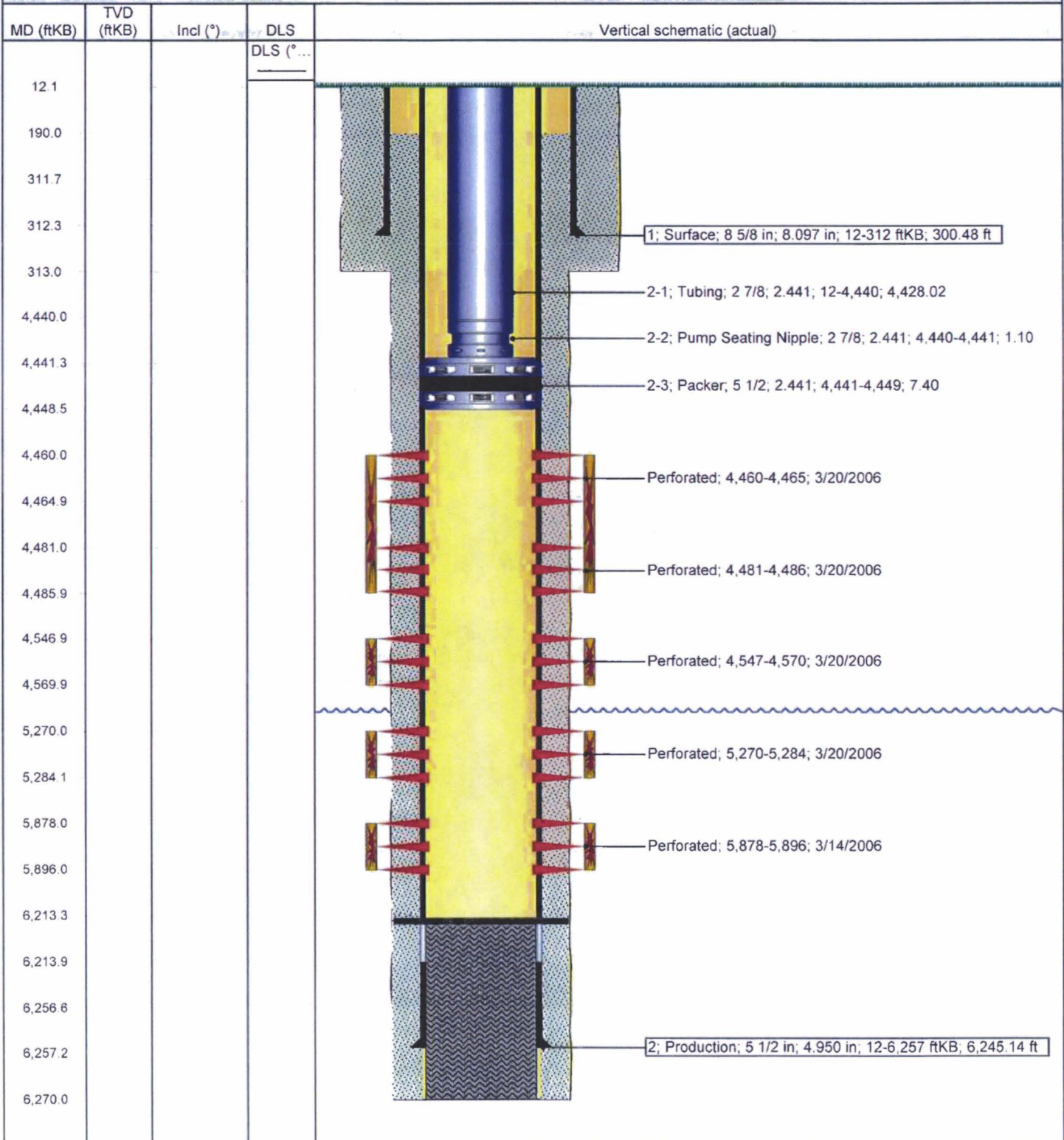
Surface Legal Location 33-8S-18E	API/UWI 43047359790000	Well RC 500155786	Lease	State/Province Utah	Field Name GMBU CTB9	County Uintah
Spud Date 2/3/2006	Rig Release Date 2/27/2006	On Production Date 3/24/2006	Original KB Elevation (ft) 4,979	Ground Elevation (ft) 4,967	Total Depth All (TVD) (ftKB) PBSD (All) (ftKB) Original Hole - 6,213.3	

## Most Recent Job

Job Category Testing	Primary Job Type	Secondary Job Type N/A	Job Start Date 1/9/2014	Job End Date 1/9/2014
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TD: 6,270.0

Vertical - Original Hole, 9/15/2015 1:13:52 PM



# NEWFIELD



## Newfield Wellbore Diagram Data Federal 3-33-8-18

Surface Legal Location 33-8S-18E		API/UWI 43047359790000		Lease	
County Uintah	State/Province Utah		Basin	Field Name GMBU CTB9	
Well Start Date 2/3/2006	Spud Date 2/3/2006		Final Rig Release Date 2/27/2006	On Production Date 3/24/2006	
Original KB Elevation (ft) 4,979	Ground Elevation (ft) 4,967	Total Depth (ftKB) 6,270.0	Total Depth All (TVD) (ftKB)	PBTD (All) (ftKB) Original Hole - 6,213.3	

### Casing Strings

Csg Des	Run Date	OD (in)	ID (in)	Wt/Len (lb/ft)	Grade	Set Depth (ftKB)
Surface	2/4/2006	8 5/8	8.097	24.00	J-55	312
Production	2/27/2006	5 1/2	4.950	15.50	J-55	6,257

### Cement

#### String: Surface, 312ftKB 2/5/2006

Cementing Company BJ Services Company	Top Depth (ftKB) 12.0	Bottom Depth (ftKB) 313.0	Full Return?	Vol Cement Ret (bbl)
Fluid Description 2% CaCL2 + 1/4#/sk Cello-Flake	Fluid Type Lead	Amount (sacks) 160	Class G	Estimated Top (ftKB) 12.0

#### String: Production, 6,257ftKB 2/27/2006

Cementing Company BJ Services Company	Top Depth (ftKB) 190.0	Bottom Depth (ftKB) 6,270.0	Full Return?	Vol Cement Ret (bbl)
Fluid Description 10% gel + 3% KCL, 3#'s /sk CSE + 2# sk/kolseal + 1/4#'s/sk Cello Flake	Fluid Type Lead	Amount (sacks) 375	Class Premilite II	Estimated Top (ftKB) 190.0
Fluid Description 2% Gel + 3% KCL, .5%EC1, 1/4# sk C.F. 2% gel. 3% SM	Fluid Type Tail	Amount (sacks) 475	Class 50/50 POZ	Estimated Top (ftKB) 3,230.0

### Tubing Strings

Tubing Description					Run Date	Set Depth (ftKB)		
Tubing					2/17/2009	4,448.5		
Item Des	Jts	OD (in)	ID (in)	Wt (lb/ft)	Grade	Len (ft)	Top (ftKB)	Btm (ftKB)
Tubing	142	2 7/8	2.441	6.50	J-55	4,428.02	12.0	4,440.0
Pump Seating Nipple		2 7/8	2.441			1.10	4,440.0	4,441.1
Packer		5 1/2	2.441			7.40	4,441.1	4,448.5

### Rod Strings

Rod Description				Run Date		Set Depth (ftKB)	
Item Des	Jts	OD (in)	Wt (lb/ft)	Grade	Len (ft)	Top (ftKB)	Btm (ftKB)

### Perforation Intervals

Stage#	Zone	Top (ftKB)	Btm (ftKB)	Shot Dens (shots/ft)	Phasing (")	Nom Hole Dia (in)	Date
4	GB2, Original Hole	4,460	4,465	4	90		3/20/2006
4	GB2, Original Hole	4,481	4,486	4	90		3/20/2006
3	GB4, Original Hole	4,547	4,570	4	90		3/20/2006
2	B2, Original Hole	5,270	5,284	4	90		3/20/2006
1	CP2, Original Hole	5,878	5,896	4	120		3/14/2006

### Stimulations & Treatments

Stage#	ISIP (psi)	Frac Gradient (psi/ft)	Max Rate (bbl/min)	Max PSI (psi)	Total Clean Vol (bbl)	Total Slurry Vol (bbl)	Vol Recov (bbl)
1	1,550	0.7	25.9	1,690			
2	2,320	0.87	25.7	2,035			
3	2,085	0.89	25.8	1,975			
4	2,045	0.89	25.3	2,275			

### Proppant

Stage#	Total Prop Vol Pumped (lb)	Total Add Amount
1		Proppant Sand 65747 lb
2		Proppant Sand 63283 lb
3		Proppant Sand 99846 lb
4		Proppant Sand 26177 lb